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THE IMPACT OF DEVELOPMENT FINANCE INSTITUTIONS

RAPID EVIDENCE ASSESSMENT, JUNE 2019

The authors of this report are

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AfDB	African Development Bank
BIO	Belgian Investment Company for Developing Countries
BMI-SBI	Belgian Corporation for International Investment
BSP	Business support programme
CDC Group	United Kingdom development finance institution (formerly the Commonwealth Development Corporation)
CGD	Center for Global Development
COFIDES	Spanish development finance institution (Compañía Española de Financiación del Desarrollo)
CSR	Corporate social responsibility
DEG	German Investment Corporation (Deutsche Investitions- und Entwicklungsgesellschaft)
DFI	Development finance institution
DFID	Department for International Development, United Kingdom
EBRD	European Bank for Reconstruction and Development
ECDPM	European Centre for Development Policy Management
EDFI	Association of European Development Finance Institutions
EIB	European Investment Bank
ESG	Environmental and social governance
FDI	Foreign direct investment
FinDev	Development Finance Institute Canada
FinnFund	Finnish Fund for Industrial Cooperation
FMO	Netherlands Development Finance Company (Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.)
GDP	Gross domestic product
GTFP	Global Trade Finance Program – International Finance Corporation
HBL	Habib Bank Ltd
IADB	Inter-American Development Bank
IDA	International Development Association – World Bank Group
IDEAS/RePEc	Research Papers in Economics bibliographic database
IEG	Independent Evaluation Group – World Bank Group
IFC	International Finance Corporation

IFU	Danish Investment Fund for Developing Countries (Investeringsfonden for Udviklingslande)
IsDB	Islamic Development Bank
JSTOR	Journal Storage digital library
LAC	Latin America and the Caribbean
LIC	Low-income country
LMIC	Lower-middle-income country
MDB	Multilateral development bank
MENA	Middle East and North Africa
MSME	Micro-, small and medium-sized enterprises
MW	Megawatt
Norfund	Norwegian Investment Fund for Developing Countries
ODA	Official development assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Cooperation and Development
OeEB	Development Bank of Austria (Oesterreichische Entwicklungsbank AG)
OKR	Open Knowledge Repository – World Bank
OPIC	Overseas Private Investment Corporation
PIDG	Private Infrastructure Development Group
Proparco	French development finance institution
PSD	Private-sector development
RCT	Randomised control trial
REA	Rapid evidence assessment
SDG	Sustainable Development Goal
SIFEM	Swiss Investment Fund for Emerging Markets
SIMEST	Italian development finance institution (Società Italiana per le Imprese all'Estero)
SOFID	Portuguese Development Finance Institution (Portugal Sociedade para o Financiamento do Desenvolvimento)
SME	Small and medium-sized enterprise
SSA	Sub-Saharan Africa
SSRN	Social Science Research Network
Swedfund	Swedish development finance institution
UMIC	Upper-middle-income country
WEF	World Economic Forum

EXECUTIVE SUMMARY

The UK Government is placing ever greater emphasis on supporting economic growth and mobilising private investment in developing countries in support of the Sustainable Development Goals (SDGs). The UK's development finance institution (DFI), CDC Group (formerly the Commonwealth Development Corporation), will play a role in achieving this goal. In October 2017, the Department for International Development (DFID) announced a capital increase for CDC of up to £3.5 billion, funded by official development assistance (ODA). Consequently, there is a need for better understanding of the development impact of DFI investment more broadly to inform effective policy decisions on the allocation and investment of ODA and other official financial flows. This rapid evidence assessment (REA) examines and synthesises the evidence base on the development impact of DFI investment, the objective being to strengthen DFID's understanding of the critical assumptions underpinning its private-sector development (PSD) theory of change to inform future PSD programming decisions.

Based on these critical assumptions, DFID currently expects increased DFI investment to have several direct and indirect impacts, including:

- higher-quality jobs across the supply chain and increased incomes for poor people
- improved access for businesses and poor people to infrastructure, goods and services.

Accordingly, this REA examines the evidence base on the impact of DFI investment in terms of: (a) raising incomes and (b) increasing access to goods and services. Where available, it also examines evidence concerning (c) the distribution of these impacts across different segments of the population.

Of the 191 items of related literature identified via a structured search, only 66 studies were found to be relevant to the REA from initial screening. This declined to 43 directly relevant studies upon examination using the quality appraisal framework agreed with DFID.[1] The other 23 studies were excluded from the review.[2]

In conducting this assessment, we faced the challenge of adapting REA best practices to the nature of DFI literature. REA best practices are indifferent to the relative state of literature in a given field, focusing on methodological elements, such as the use of control groups, to

[1] This is discussed further in section 2.4. It is important to note that the quality assessment of the studies is not reflective of their impact or usefulness to the body of literature more generally. Among other requirements, the framework judged the studies based on their engagement with previous DFI literature, the transparency and replicability of the study, the independence of the data used in the study and the internal and external validity of the findings.

[2] These 23 studies have been classified as contextual studies and are summarised in Annex D for completeness.

determine whether a study is methodologically sound. The DFI literature is primarily written by policy-focused institutions for policy audiences, requiring a different level of REA methodological complexity. Thus, we adapted our quality appraisal framework accordingly.[3]

For each of the three components of the research question, we have examined the DFI investment impacts at the aggregated level, as well as in four sectors that emerged as clear and separate focal points in the literature, namely, investments in finance, energy, manufacturing and non-energy infrastructure.

We note that the target country or region of DFI investments is reported for 37 of the relevant studies, with most centred on investments in Asia, Africa and Latin America and the Caribbean (LAC). Almost half of these (18) studies analyse regional investments in Africa or investments in specific African countries.

The main conclusions of the REA are as follows:

Do DFI investments contribute to increased incomes by generating employment?

Overall, DFI investments stimulate job growth, which can lead to higher incomes.[4] A strong body of evidence indicates that DFI investment generates jobs at the national level and at the DFI portfolio level. Financial-sector and energy-sector investments also stimulate increases in gross employment.

National-level studies show that DFI investments create employment. The studies indicate that there is a direct positive impact on employment generation when individual DFI investments are assessed at the aggregate country level. However, there are few studies of this type, so no firm conclusions can be drawn.

DFI portfolio-level studies suggest that DFI investments create employment. While the studies find that DFI investments increase direct and indirect employment, this comes with a significant caveat. As portfolio-level data are wholly dependent on self-reporting by the DFIs, caution should be exercised in drawing firm conclusions.

Financial-sector investments funded by DFIs create employment. Existing access-to-finance impact assessments tend to focus on small and medium-sized enterprise (SME) finance programmes, where the DFIs primarily fund local banks to expand their SME lending portfolios. The limited number of reviewed studies report that SME funding beneficiaries have expanded their operations and directly created new jobs.

[3] Upon consultation with DFID, we excluded annual DFI financial and/or impact reports to avoid relying on self-reported data from the DFIs. While some of the studies have used these data in their analyses, those deemed 'high quality' are not solely reliant on them.

[4] Much of the literature focuses on job creation, with little discussion of the income effects. Consequently, we focus on job creation as a proxy indicator for increased income, although we recognise that job creation may not fully translate into higher earnings.

There is evidence of employment generation (and growth in gross domestic product, or GDP) as a result of DFI energy and non-energy infrastructure investments, whereas there is no evidence available on the employment impacts of DFI manufacturing-sector investments. The limited number of energy-sector and non-energy infrastructure studies indicate that investments in power supply and power transmission have a positive direct and indirect employment impact – with the indirect effects being significantly larger than the direct impacts. However, it is important to note that the indirect employment calculations are model-based and may under- or over-estimate indirect employment.

Do DFI investments contribute to increased access to goods and services?[5]

DFI investments have increased access to goods and services. The evidence base for access to goods and services is much weaker than that on the impact of DFI investment on job creation and is considered 'moderate'. Most of the evidence base (14 high- and medium-quality studies) stems from studies on energy-sector investments, which find that DFI investment has increased the provision of energy. There is limited or no evidence of increased access to goods and services from investments in manufacturing and non-energy infrastructure in other sectors.

Energy-sector DFI investments have increased the supply of energy, but there is limited evidence that this has increased access to electricity for consumers. The studies present consistent evidence that DFI investments have contributed to the installed energy base, although there are issues as to how much of the installed capacity can be directly attributed to DFI investment. The literature finds that the increase in installed capacity has reduced energy prices and improved the reliability of energy supply, but there is no strong evidence that it has increased access for consumers.

Finance-sector DFI investments have increased access to finance. There is a limited evidence base showing that DFI investments have helped SMEs to access finance where they otherwise would not and that DFI finance has helped to increase access to trade finance in low-income countries (LICs).

What are the distributional impacts of DFI investments on different segments of the population?

There is only modest evidence to inform understanding of the distributional impacts of DFI investment on different segments of the population and this evidence is spread thinly across different distributional segments. Hence, there is no strong evidence from which to draw firm conclusions as to how DFI investment impacts affect metrics such as poverty, gender differences in employment or youth employment. This lack of evidence is down to a paucity of studies even mentioning these impacts.

[5] The access to goods and services discussed most in the studies concerns access to utilities (for example, water and energy) or finance.

DFIs tend to, at least partially, target their investments to what are assumed to be poverty-reducing sectors and to poor countries, but the limited body of evidence shows no impact on poverty at the national or portfolio levels**.** There is no evidence on gender and youth employment impacts.

DFIs consider the issue of decent jobs, but there is no evidence available on the creation of such jobs. Studies show that DFIs have integrated labour standards into their investment policies and that investment can improve job quality by aiding the development of higher-value and higher-productivity sectors. These sectors offer greater formal protection and skills-development opportunities, but the extent to which DFI investment impacts job quality is not mentioned.

Finance-sector DFI investments have increased female employment. However, there is not enough evidence to assess the distributional impact on youth or any evidence to assess the impact on the poor.

Evidence gaps and recommendations

This REA has identified numerous research gaps. First, **few studies explain the underlying estimates upon which the indirect employment figures are based.** In all cases, indirect employment figures are (when using best methods) a close approximation, but not an actual count of employment effects. Studies that report on or use indirect employment effects in their analyses must explain the underlying estimates and econometric modelling techniques on which the indirect employment figures are based. A further solution could be to undertake deep dives along investment supply chains to count indirect effects. Compared with literature studying the impacts of foreign direct investment (FDI) and international assistance, DFI literature lags significantly in terms of number of studies, as well as the complexity and transparency of the methodologies used.

Second, there is still **no clear metric to help compare the efficiency and effectiveness of DFI investments**. While DFI harmonisation efforts have progressed, differing impact-reporting methodologies persist, hindering the comparability of study findings. It remains difficult to assess whether these impacts were achieved by employing funds efficiently.

Third, there is **limited LIC representation** in the body of evidence, with only 2 of the 43 studies focused solely on DFI investment in such countries. This means that either significantly fewer DFI impact investments are undertaken in LICs than in middle-income countries (MICs), or it is harder to undertake impact studies in the former. This issue needs to be clarified prior to any push to undertake more studies in LICs.

Fourth, **much of the DFI literature does not acknowledge the counterfactual (i.e. no DFI investment)** and counts impact as if it were wholly derived from DFI investment. This issue is further exacerbated by the fact that **impact reporting is a responsibility that has remained with DFIs**, which have different incentives to independent researchers. More and higher-quality studies are needed to better understand the **net benefits of DFI investment.** These studies would require deep dives into investment markets to capture anonymised firm-level data, or could even include micro-level randomised experiments. While it is understood that

acknowledging the counterfactual may be difficult for potential commercial, legal or logistical reasons, caution should be exercised in drawing firm conclusions until DFIs are capable of collecting more data and methodologies become more rigorous. One potential solution would be for DFIs, in collaboration with their stakeholders, to provide more resources for the independent collection and verification of data across relevant impact groups, which could help increase the robustness of impact results.

Lastly, there is **a dearth of reporting on the impact of DFI investment on poverty**. If DFIs are to claim that their investments have poverty-alleviating impacts, they must have data to substantiate these claims. Moreover, the data must be disaggregated to better understand which people are benefiting most from DFI investments. Attempting to capture this type of distributional impact may present challenges in terms of being able to (a) accurately and effectively measure poverty-reduction effects and (b) accurately attribute poverty-reduction impacts to DFI investments. Despite this, capturing poverty-reduction impacts would significantly boost DFI development-impact attribution.

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1. INTRODUCTION

1.1 CONTEXT AND BACKGROUND

The UK Government is placing ever greater emphasis on supporting economic growth and mobilising private investment in developing countries in support of the SDGs, as outlined in DFID's Economic Development Strategy. Moreover, during her visit to Africa in 2018, the UK Prime Minister outlined the government's goal of supporting the mobilisation of up to £8 billion in public and private investment in Africa to create jobs and boost growth and to make the City of London Africa's future investment partner of choice.[6]

The UK's DFI, CDC Group (formerly the Commonwealth Development Corporation), will play a role in achieving this goal. In October 2017, DFID announced a capital increase for CDC of up to £3.5 billion, funded by ODA. This will allow a significant step-change in the level of CDC's annual investment. The new strategic framework that DFID agreed with CDC for 2017 to 2021 has fuelled greater ambition to increase the impact of CDC investment and tasks CDC with increasing its investment in higher-risk markets and sectors. DFID is also a major shareholder in several multilateral development banks (MDBs) and DFIs that are stepping up their investment (for example, the $2.5 billion International Development Association (IDA) private-sector window and the International Finance Corporation's (IFC) capital increase). In light of this emphasis and DFID's increased investment of ODA in CDC, there is a need for better understanding of the development impact of DFI investment more broadly to inform effective policy decisions on the allocation and investment of ODA and other official financial flows. This REA will also be of significant value to policy-makers in other member countries of the Organisation for Economic Co-operation and Development (OECD) that are scaling up investment in or considering establishing their own DFIs.

Accordingly, the overall objective of this REA is to assess and synthesise the evidence base on the development impact of DFI investment. This REA will strengthen DFID's understanding of the critical assumptions that underpin its PSD theory of change and will inform future PSD programming decisions.

Based on these critical assumptions, DFID's currently expects increased DFI investment to lead to a number of indirect and direct impacts, including:

- higher-quality jobs across the supply chain and increased incomes for poor people
- improved access for businesses and poor people to infrastructure, goods and services.

[6] UK Government (2018) (accessed 7 February 2019).

This translates into a research question that focuses on the impact of DFI investment in raising incomes and improving access to goods and services, and an interest in the distributional impact on different segments of the population.

1.2 RESEARCH QUESTION

This REA has sought to review and assess the evidence base relevant to the following research question:[7]

> *What impacts do development finance institutions' (DFI) investments in the private sector have on: (i) raising incomes (either through formal job generation as a result of business growth or through indirect channels, e.g. supply chains, complementary activities and informal jobs) and (ii) improving access to goods and services (e.g. energy, transportation and financial services)? Is there enough evidence to understand the distributional impact in this regard and, if so, what distributional impacts are identified?*

1.3 INTERPRETING THE RESEARCH QUESTION

There are several elements of the research question that require clarification.

1.3.1 DEFINITIONS

Development finance institutions (DFIs): Relying on the OECD's description (OECD, n.d.), this REA understands DFIs to be:

> *Specialised development banks or subsidiaries set up to support private-sector development in developing countries. They are usually majority owned by national governments and source their capital from national or international development funds or benefit from government guarantees. This ensures their creditworthiness, which enables them to raise large amounts of money on international capital markets and provide financing on very competitive terms.*

Investments: Similarly relying on OECD (1996) definitions, the term 'investments' is commonly used as an umbrella term in relation to the investment instruments often used by DFIs in developing countries:

[7] After discussion with DFID at the start of the inception phase, it was agreed that the research question would be amended to focus the REA on the general impact of DFI investment on raising incomes and access to goods and services, and to then understand the distributional impact where quality evidence was available. This was based on the understanding that the literature on distributional impacts was likely to be far smaller than the broader literature on impact. By revising the research question, the REA has allowed for the identification of the full body of literature on raising incomes and access to goods and services, as well as the body of evidence on merely distributional impact.

> *Investment means every kind of asset owned or controlled, directly or indirectly, by an Investor, [including]: (i) an enterprise; (ii) shares, stock or other forms of equity participation in an enterprise; (iii) bonds, debentures, and other debt of an enterprise; (iv) an interest arising from the commitment of capital or other resources in the territory of a Contracting Party to economic activity in such territory, such as under contracts involving the presence of an investor's property in the territory of a Party, including turnkey or construction contracts or concessions, or contracts where remuneration depends substantially on the production, revenues or profits of an enterprise; (v) an interest in an enterprise that entitles the owner to share in income or profits of the enterprise [and] the assets of that enterprise on dissolution; (vi) claims to money and claims to performance pursuant to a contract having an economic value; (vii) intellectual property rights; (viii) rights conferred pursuant to law such as licenses and permits; (ix) any other tangible and intangible, movable and immovable property and any related property rights, such as leases, mortgages, liens and pledges.*

Investment instruments: DFIs use a range of investment instruments. The most common studied in the literature are:[8]

- equity and quasi-equity instruments
- debt instruments
- guarantees and risk insurance

Developing countries: For this REA, developing countries as those in the low-, lower-middle and upper-middle-income groupings of the World Bank (2018) country income classification system.

Employment: Employment includes monetarily retributed activities. When possible, this REA differentiates between direct, indirect and induced employment impacts. Also, it categorises employment by the quality of job (see below), formality, usage (e.g. full time or part time) and payment type. DFI definitions of employment are also included and, where there are variances or discrepancies with the above definition, these are highlighted and analysed.

Quality jobs: We use the International Labour Organization's (ILO, n.d.) definition of 'decent work', which defines decent employment as involving:

> *… opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men.*

[8] Other important tools that often accompany DFI investment include grants and project preparation facilities.

This definition is used to frame the concept of quality jobs in the SDGs and is in line with the definition of 'quality jobs' used by the Independent Commission for Aid Impact.

Distributional impacts: These are impacts across diverse groups of people. In this REA, we include effects on income groups, with a focus on poverty (see below), gender and youth.

Poverty: While recognising the multi-dimensional aspects of poverty (beyond income measures) and the fact that poverty levels are relative to context, in the interest of setting clear parameters, this REA defines poverty using the World Bank (2019) income classification, whereby people earning less than $1.9 per day are classified as poor.

Businesses: Wholly privately owned enterprises in developing countries.

1.3.2 CONCEPTUAL FRAMEWORK

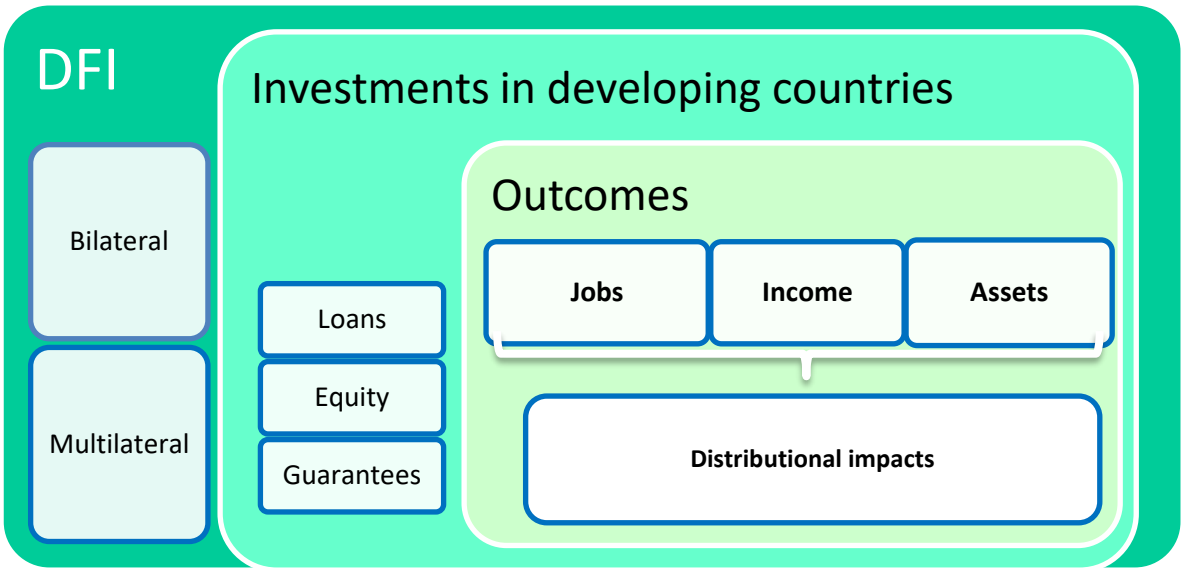
The conceptual framework defines the scope of the REA as examining the following:

- DFI investment activities in developing countries
- the economic mechanism of impact, i.e. how DFI investments (either through equity, debt, guarantees or risk insurance) affect firms that have not had access to market instruments and how these impacts can have second-order effects on (a) quality jobs that provide both employment and income and (b) access to services
- the quantitative impacts on (a) jobs and income[9] and (b) assets, defined as access to goods, services and infrastructure
- the distributional impacts of DFI investments, by looking at how (and why) the above impacts on jobs, income and goods and services are distributed and differ across poverty levels and gender.

A visual representation of the nesting/hierarchy of issues under review by the REA within the conceptual framework can be found in Figure 1.

[9] The vast majority of the literature focuses on job creation, with little discussion of the income effects. because of this, we focus on job creation as a proxy for increased income, although we recognise that job creation may not fully translate into increased income.

Figure 1. Conceptual framework visualisation



1.3.3 THEORY OF CHANGE

The general theory of change assumed by this REA, which is adopted from DFID's (2017) business case for CDC, is:

- DFIs deploy commercial investment and scale new innovative approaches of higher-risk capital.
- This investment and advisory brings much-needed capital and expertise to businesses in targeted sectors.
- This new capital and expertise increases the quantity and quality of portfolio companies, which then build a track record and achieve demonstration effects to other investors, thereby building the demand for and supply of finance.
- As the quantity and quality of portfolio companies grow, so too do the number of available jobs, the quantity and quality of goods and services, and tax receipts to the local government. These investment effects induce economic development via a more substantive poverty-reducing private sector, which leads to better gender outcomes and better-quality jobs.

1.4 STRUCTURE OF THE REPORT

The REA is structured as follows:

- Section 2 discusses our methodology, including the search criteria to identify relevant evidence and the quality assessment approach.
- Section 3 presents our general findings. The section presents a high-level overview of the evidence base and its coverage of the three components of the research question. We then examine the evidence according to country income groupings, geographic groupings, type of research design and synthesis theme. The section concludes by highlighting two limitations of the REA evidence base.

- Section 4 presents the thematic synthesis across five emerging themes. For each, we assess the impacts on income (mainly through employment effects) and access to goods and services, as well as the distributional impacts, where possible.
- Section 5 provides a brief illustration of the research gaps that we have identified through this REA and the potential for further investigations.
- Section 6 concludes with our reflections.

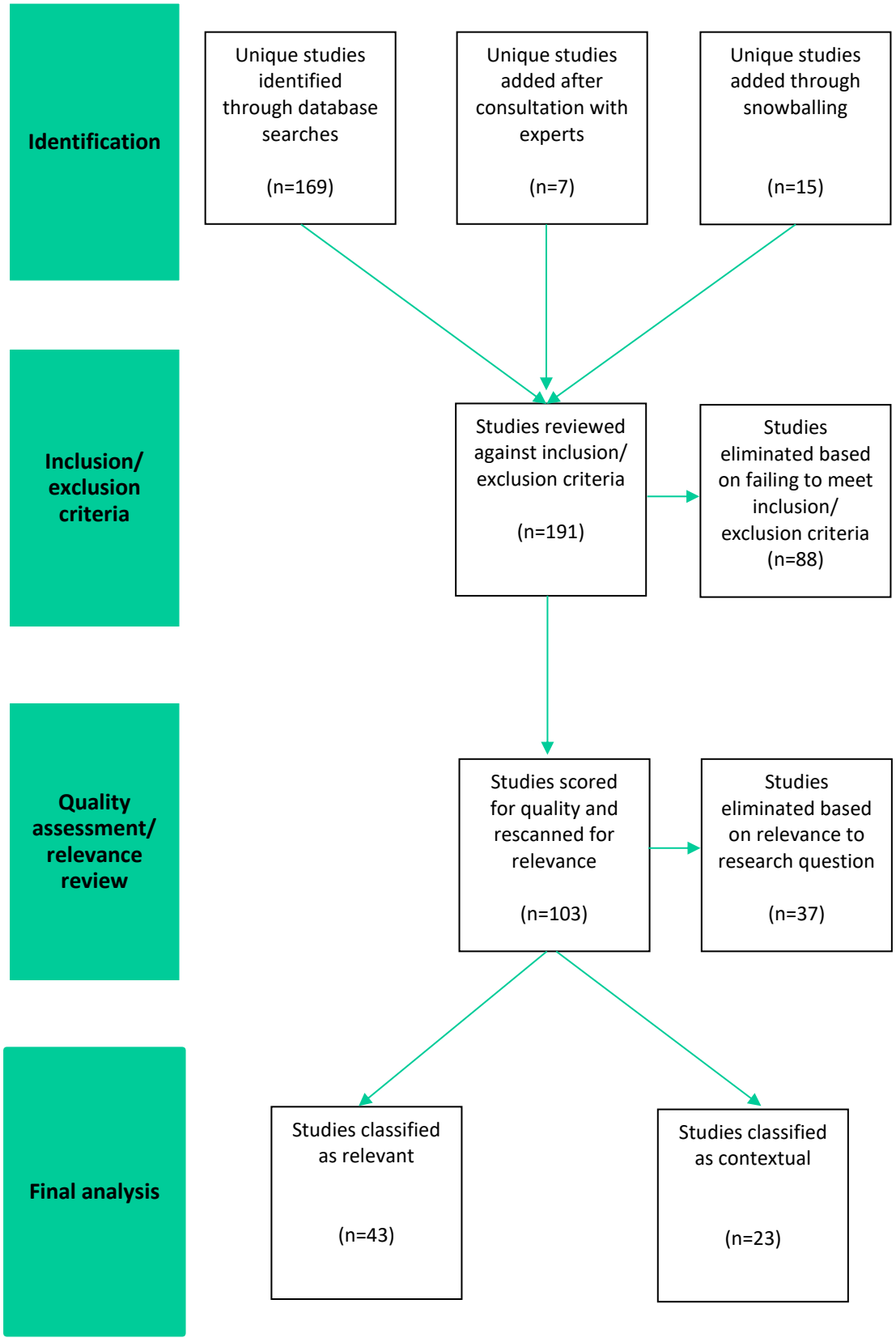
2. METHODOLOGY

This REA followed a systematic process of search and assessment, as outlined in the UK Civil Service's (2014) guidance, 'How to do a REA'. This process included:

- an evidence search
- application of inclusion and assessing for relevance
- assessment of evidence quality

The structured search, combined with expert consultations and snowballing, yielded 191 studies that were potentially relevant to the research question. Following further consultations with DFID regarding the suitability of including DFI annual reports, the number of studies was narrowed to 103 studies that met the inclusion criteria. Upon an in-depth reading of these 103 studies to ensure their relevance, another 37 studies were eliminated from the review. The remaining 66 studies were assessed for quality and were divided based on their direct applicability to the REA: 43 were classified as directly addressing the research question, while the other 23 provided important contextual information to the analysis (see Annex D for a summary of these). Figure 2 illustrates this process.

Figure 2. Diagram of evidence analysis



2.1 SEARCH STRATEGY

The search for studies followed a structured process. Table 1, below, lists the databases used for evidence searches.

Table 1. List of databases searched

Search engines	Journals	Institutional databases	
Google Scholar	*African Development Finance Journal*	ADB	IsDB
		AfDB	Norfund
JSTOR		BIO	ODI
	Finance and Development	BMI-SBI	OECD eLibrary
IDEAS/RePEc		CDC	OeEB
		CGD	OPIC
International Bibliography of the Social Sciences	*Journal of Development Economics*	COFIDES	PIDG
		DEG	Proparco
	Journal of Development Studies	DFID	SIFEM
International Political Science Abstracts		EDFI	SIMEST
		FinDev	SOFID
	Journal of Emerging Market Finance	FinnFund	Swedfund
Science Direct		FMO	WEF
		IADB	IEG
Scopus	*Review of Development Finance*	IFC	OKR
		IFU	
SSRN		Institute of Development Studies	
	World Development		

Note: See list of abbreviations for full organisational names.

We began our search by testing our full list of search strings (see Table 2).

Table 2. Search phrases

'DFI' and 'impact'	'DFI' and 'income'
'DFI' and 'poverty reduction'	'DFI' and 'employment'
'DFI' and 'jobs'	'DFI' and 'growth'
'DFI' and 'banking'	'DFI' and 'financial services'
'DFI' and 'access to services'	'DFI' and 'informal economy'
'DFI' and 'inequality'	'DFI' and 'capital'
'DFI' and 'infrastructure'	'DFI' and 'investment'
'DFI' and 'gender'	

After a few initial searches, we found that using the term 'DFI' was consistently returning results for 'direct foreign investment' rather than 'development finance institution'. To ensure that our searches returned the most relevant results, we chose to search each string listed above with

the full term ‘development finance institution’ rather than ‘DFI’. However, we continued to search the term ‘DFI’ once per database to ensure all relevant papers were captured.

We began all searches by testing ‘development finance institution’ and ‘DFI’. In cases where these searches for the broadest terms returned fewer than 70 results, we reviewed all titles/abstracts. Where searches returned more than 70 results, we tested all additional search terms (such as ‘DFI’ and ‘impact’, ‘DFI’ and ‘income’). Having read all results returned using the broadest strings, we feel confident that all relevant articles were captured.

In the case of journals, the searches typically returned 100–250 results for the broadest strings and fewer than 50 results for the more specific strings. For the search engines, notably Google Scholar, the number of results returned from each search was more substantial, ranging from 500 to 2,500 results.

Many of the institutional databases we searched either did not have a searchable database or included a search function for the entire website. In the latter cases, we found that searching the entire website returned many irrelevant results (news articles, web pages, etc.).

To search more pragmatically across the institutional databases, we focused our efforts on searching for relevant information on the ‘publication’ pages of the institutions’ websites. In many cases, these webpages had fewer than 50 publications listed.

Following the various database searches, we conducted a ‘snowball’ search, whereby we sought new sources of literature through the information that we already possessed, i.e. cited papers, data, reports or databases. Additional sources identified through this snowball technique adhered to the inclusion/exclusion and quality criteria. This process led to the inclusion of 15 unique studies.

Concurrently, we contacted several experts among DFI staff, academics and policy-makers to ensure balance. The experts who responded to our requests, with whom we consulted further to ensure that our searches had covered all relevant material, are listed in Table 3. We subjected the seven unique studies derived from these expert consultations to our inclusion/exclusion and quality assessment criteria also.

Table 3. DFI experts consulted

Dr Paddy Carter, Director, Research and Policy, CDC Group, London, UK
Mr Christian Rosenholm, Global Team for Evaluation and Analytics, IFC, Washington, DC, US
Mr Stoyan Tenev, Senior Manager, Financial and Private Sector Development, Independent Evaluation Group (IEG), World Bank Group, Washington, DC, US
Mr Stan Stavenuiter, Senior Evaluation Officer, Strategy and Corporate Affairs, Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V. (FMO), The Hague, The Netherlands
Mr Alex MacGillivray, Director, Development Impact Evaluations, CDC Group, London, UK
Mr Angus Wilson, Senior UK Advisor, European Bank for Reconstruction and Development (EBRD), London, UK

2.2 INCLUSION AND EXCLUSION CRITERIA

We utilised the criteria outlined in the technical proposal to determine whether studies should be included in the evidence base for review (see Table 4).

Table 4. Indicative inclusion and exclusion criteria

	Inclusion criteria	Exclusion criteria
Language	English only	Not in English
Publication date	2008–2018	Pre-2008
Publication format	Journal articles, working papers, evaluations, institutional reports	DFI annual reports,[10] other (e.g. books, book chapters, student papers, dissertations, unpublished works)
Aim of study	Study must consider impact of investments made by DFIs on populations in LICs, lower-middle-income (LMICs) or upper-middle-income countries (UMICs), as defined by the World Bank	Any study that does not consider investments by DFIs as the independent variable OR does not consider the impact from the perspective of LICs, LMICs or UMICs

In searches performed on large databases, such as Google Scholar, we filtered results by year from the outset to ensure that the search returned a manageable number of results. On smaller institutional databases, we reviewed all documents and manually excluded results that did not meet the aforementioned inclusion/exclusion criteria.

[10] DFI annual reports were added to the exclusion criteria following consultation with DFID after submitting our REA scoping report.

2.3 DOCUMENT CODING

Relevant studies that passed through the inclusion and exclusion criteria were coded along the following parameters:

Table 5. Coding parameters

Author(s)	-
Title	-
Year of publication	-
Research type	Primary (P) Secondary (S) Theoretical (T)
Research design	Experimental (P) Quasi-experimental (P) Observational (P) Systematic review (S) Other review (S) N/A (T)
Data analysis method	Qualitative Mixed method Quantitative
Geographical coverage	Countries from which impact of DFI investment was measured, grouped into regions (Africa, Asia, Europe, LAC, Middle East and North Africa (MENA) and unspecified)
Income-level coverage	Income levels of countries from which the impact of DFI investment was measured, based on World Bank classifications (LIC, LMIC, UMIC and high-income country, or HIC)
Summary of major findings	-

A stylised summary of these parameters can be found in Section 3.

2.4 QUALITY APPRAISAL FRAMEWORK

Each included study was assessed against a standardised assessment framework, designed based on the recommendations of DFID's (2014) guide, 'Assessing the strength of evidence'. The framework was adapted to recognise that much of the DFI literature was authored outside of academia and written for a policy audience. Thus, it was necessary to simplify the assessment and put greater onus on the quality and independence of the underlying data from which the specific pieces of literature drew their conclusions. This adapted framework (see Table 6) was agreed with DFID in advance of conducting the REA.

Table 6. Appraisal framework

	Score
Conceptual framework	
Does the study acknowledge and consider other existing research within its own scope of research?	1 = No other studies are cited 2 = Studies are cited, but are not wholly pertinent to the discussion 3 = Studies are cited and are pertinent to the research
Does the study posit a clear hypothesis/research question?	1 = No clear hypothesis/research question is presented 2 = A hypothesis/research question is presented, but no clear answer is provided 3 = A hypothesis/research question is presented and a clear answer is provided
Subtotal: 6	
Methodology and data	
Does the study outline a transparent and replicable methodology (including using appropriate proxy variables when necessary) that is linked to the research hypothesis/question?	1 = The study's methodology is not appropriate 2 = The study outlines some aspects of an appropriate methodology, but it is not replicable 3 = All datasets and methodological details are clearly defined and appropriate and the study is replicable
Are the data sufficiently independent?	1 = Data were gathered from possibly biased sources 2 = Some data were gathered from possibly biased sources; other data are independent. 3 = All data gathered are independent of phenomena being studied
Are data corroborated/supplemented by a secondary source (i.e. interviews, field work, site visits, quantitative analysis, robustness checks, etc.)?	1 = No 2 = Yes, by one secondary source 3 = Yes, by more than one secondary source
Subtotal: 9	
Validity	
Does the study suffer from any internal validity concerns (endogeneity, etc.) or external validity concerns?	1 = Yes, there is a problem, which is neither addressed nor acknowledged 2 = There is a validity problem, which has been identified, but not adequately addressed 3 = There are no issues with validity OR potential threats to validity have been identified and controlled for
Subtotal: 3	
Analysis and results	
Are the results clearly communicated, backed by rigorous analysis and mentioned with appropriate limitations and caveats?	1 = No 2 = Analysis and results are clear, limitations should be more clearly communicated 3 = Yes
Subtotal: 3	
Total: 21	

The scores from the appraisal framework were then used to classify the individual items of literature into low, medium and high quality (see Table 7).

Table 7. Appraisal classification

Quality assessment	Criteria score total (range)	Definition
Low quality	0–11	Major deficiencies in principles of quality
Medium quality	12–16	Some deficiencies in principles of quality
High quality	17–21	Exhibits multiple principles of quality

It is important to note that the quality assessment of a study is not reflective of its impact or usefulness to the body of literature. Our assessment only judges the studies on the preceding parameters and is unable to account for methodological rigour that may have gone unreported in certain studies. Also, it is possible that the modifications made to the appraisal framework did not go far enough to recognise the contribution of grey literature to the study of DFI impact; however, maintaining a somewhat consistent appraisal approach to those of other DFID REAs was also a significant consideration.

It was agreed with DFID that studies determined to be of low quality would be excluded from the thematic synthesis described in Section 4.

2.5 QUALITY ASSURANCE

The quality appraisal of the 66 items of literature, plus the 23 items of contextual literature, was undertaken by one researcher using the appraisal framework (Table 6). The researcher recorded scores for each parameter, which were summed to provide an overall assessment that was transparent and replicable. A second researcher who led the synthesis drafting process reviewed this assessment of the literature to check for consistency. The average scores are presented in Table 8.

Table 8. Average scores from appraisal framework

	High-quality studies	**Medium-quality studies**	**Low-quality studies**
Number of studies	**36**	**21**	**9**
	Average score		
Conceptual framework			
Does the study acknowledge and consider other existing research within its own scope of research?	2.6	2.1	1.2
Does the study posit a clear hypothesis/research question?	2.8	2.6	1.0
Methodology and data			

	High-quality studies	Medium-quality studies	Low-quality studies
Number of studies	**36**	**21**	**9**
	Average score		
Does the study outline a transparent and replicable methodology (including using appropriate proxy variables when necessary) that is linked to the research hypothesis/question?	2.9	1.9	1.0
Are the data sufficiently independent?	2.2	1.9	1.8
Are data corroborated/supplemented by a secondary source (i.e. interviews, field work, site visits, quantitative analysis, robustness checks, etc.)?	2.3	2.0	2.0
Validity			
Does the study suffer from any internal validity concerns (endogeneity, etc.) or external validity concerns?	1.9	1.1	1.0
Analysis and results			
Are the results clearly communicated, backed by rigorous analysis and mentioned with appropriate limitations and caveats?	2.6	2.1	1.8
Average total (out of a 21 maximum score)	**17.3**	**13.7**	**9.8**

To reduce researcher bias and ensure consistency and transparency in the quality appraisal, the team leader identified a sample of 15 studies for blind quality appraisal by the team itself and the project quality-assurance advisor, using the agreed assessment framework. This sample represented 24% of the studies identified as relevant to the synthesis. Again, scores for each parameter were recorded and summed to provide an overall assessment of quality. The team leader cross-checked the blind assessment scores with the researcher assessment scores. Any differences in assessment rating were discussed among the team prior to agreeing final quality ratings. Of the 15 studies, only 1 study had its overall quality rating revised.

As part of its internal procedures, DFID also identified four studies for blind assessment. As a result, one study in the contextual section had its score revised.

As the framework was adapted to recognise that much of the DFI literature was produced outside of academia and written for a policy audience, it was unsurprising that most studies failed to properly acknowledge validity concerns. Discussions of endogeneity-omitted variables or other technical weaknesses of a methodology are rare among policy works; the DFI literature is no exception. Moreover, many of the low-quality studies presented findings with little description of the methods employed or how a researcher could replicate the findings. Again, this is not uncommon among policy works. While these omissions prevent the inclusion of these studies in this REA, they do not mean that the literature is without its own specific purpose.

2.6 SCORING THE BODY OF EVIDENCE

The assessment of the strength of the evidence base was adapted from the DFID Migration REA (Fratzke and Salant, 2018), based on DFID (2014). This framework ranks the strength of evidence from the overall body down to identified themes, according to six levels (see Table 9). This ranking is based on the size, quality, context and consistency[11] of studies. Given the lower total number of studies included in this REA, it is unsurprising that the threshold for considering the evidence base 'strong', 'moderate' or 'modest' was only met when we assessed the DFI literature at the level of the three main components of the research question. Once this literature was further divided to look at impacts in the emergent sectors, the number of studies barely even reached the level required to label a body of evidence as 'modest'. For example, while there were 28 studies linking DFI investment to employment (component one of the research question), these studies were distributed among the sectoral divisions in such a way that there was only limited evidence linking DFI investment in a specific sector to employment.

Table 9. Body of evidence scoring

Strength score	Size	Quality	Context	Consistency
Compelling evidence	Large: 16+	High	DFI	Consistent
Strong evidence	Large: 16+	High/medium	DFI	Consistent
Moderate evidence	Medium: 9–15	High/medium	DFI/mixed	Consistent
Modest evidence	Medium: 9–15	Medium	DFI/mixed	Inconsistent
Limited evidence	Small: 2–8	Medium	DFI/mixed	Mixed
No evidence	Negligible: 0–1	Medium	DFI/mixed	Mixed

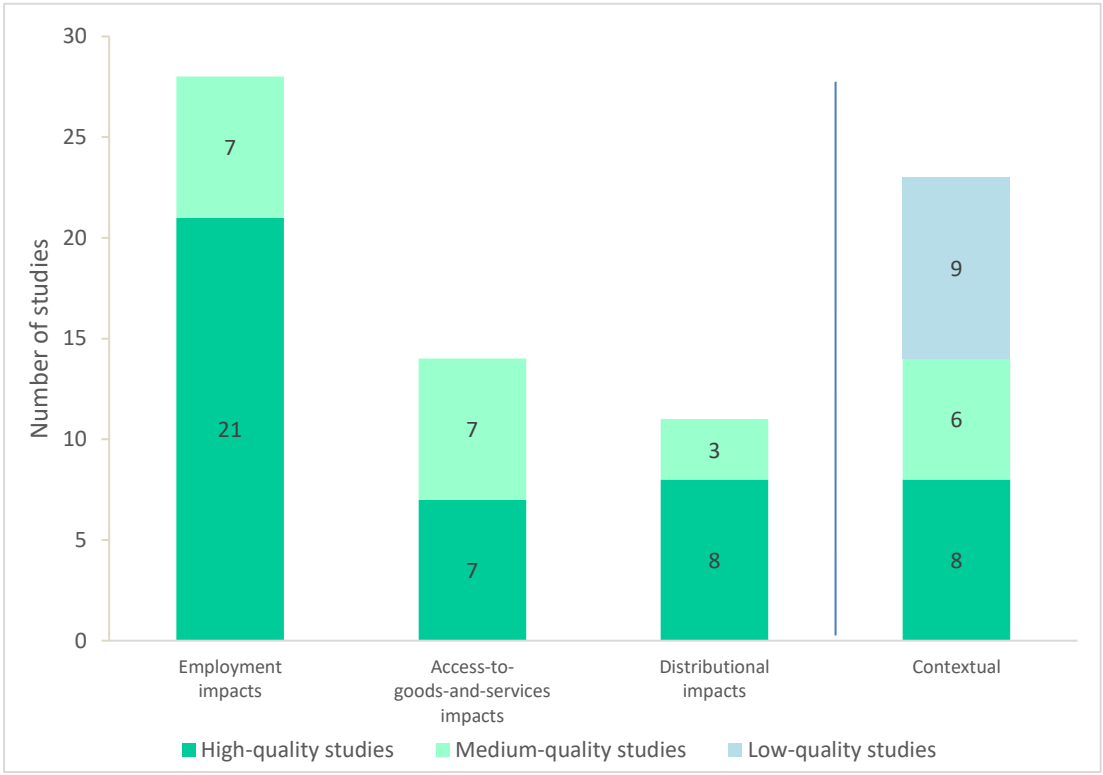
[11] Consistency is based on the following scoring system, taken directly from DFID (2014). **Consistent** = A range of studies point to identical, or similar conclusions. **Inconsistent** = One or more studies directly refute or contest the findings of another study or studies carried out in the same context or under the same conditions. **Mixed** = Studies based on a variety of different designs or methods, applied in a range of contexts, have produced results that contrast with those of another study.

3. OVERVIEW OF THE EVIDENCE BASE

3.1 OVERALL BODY OF EVIDENCE

Of the 66 studies assessed, 43 responded directly to the research question. The other 23 studies discussed other important topics in the DFI literature, but did not touch upon increased incomes or increased access to goods and services due to DFI investment. Among other topics, these contextual studies focused on financial additionality, DFI influence on host-country policies and the impact of DFI environmental and social governance (ESG) processes on domestic firms. These contextual studies do not form part of the synthesis, but they have been summarised in Annex D for completeness. Figure 3 illustrates the breakdown of the range and quality of evidence that addresses the research question, including these contextual studies.

Figure 3. Range of evidence by research component and quality



Note. Coverage of research component and quality is not mutually exclusive. Of the 66 studies in the REA, 10 discussed two or more impacts.

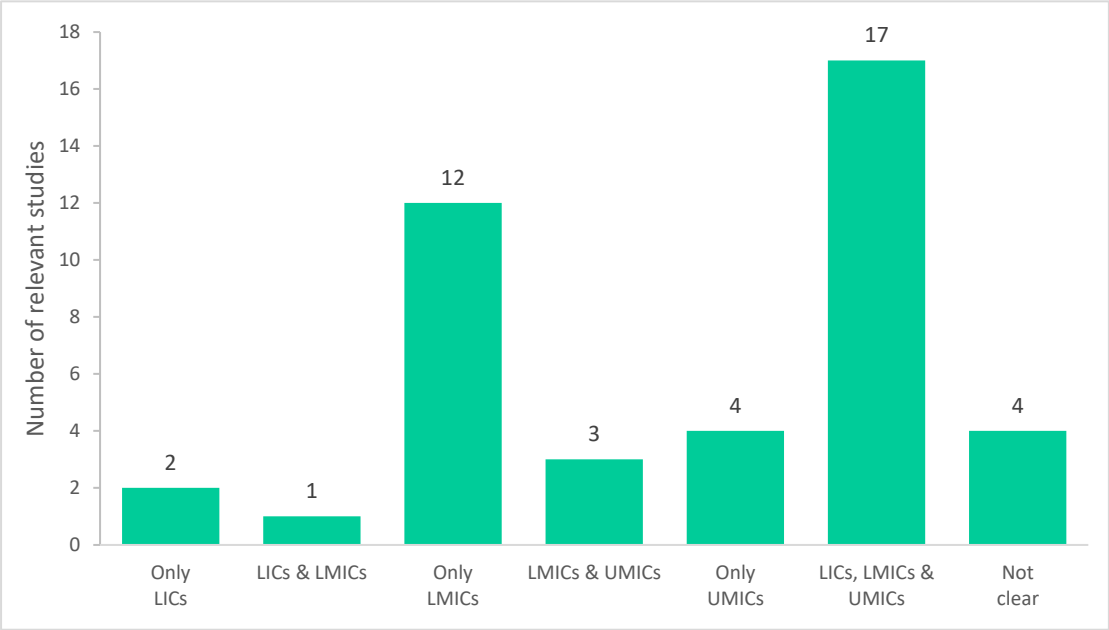
Overall, 36 of the 66 studies included in this REA are deemed to be high quality, 21 are considered medium quality and 9 are low quality. Of the 43 studies that directly address the research question and are included in our main analysis, 28 are high quality (65%) and 15 are medium quality (35%).

3.2 RANGE OF STUDIES

In this section we describe the body of evidence using only the attributes of the 43 studies that respond directly to the research question.

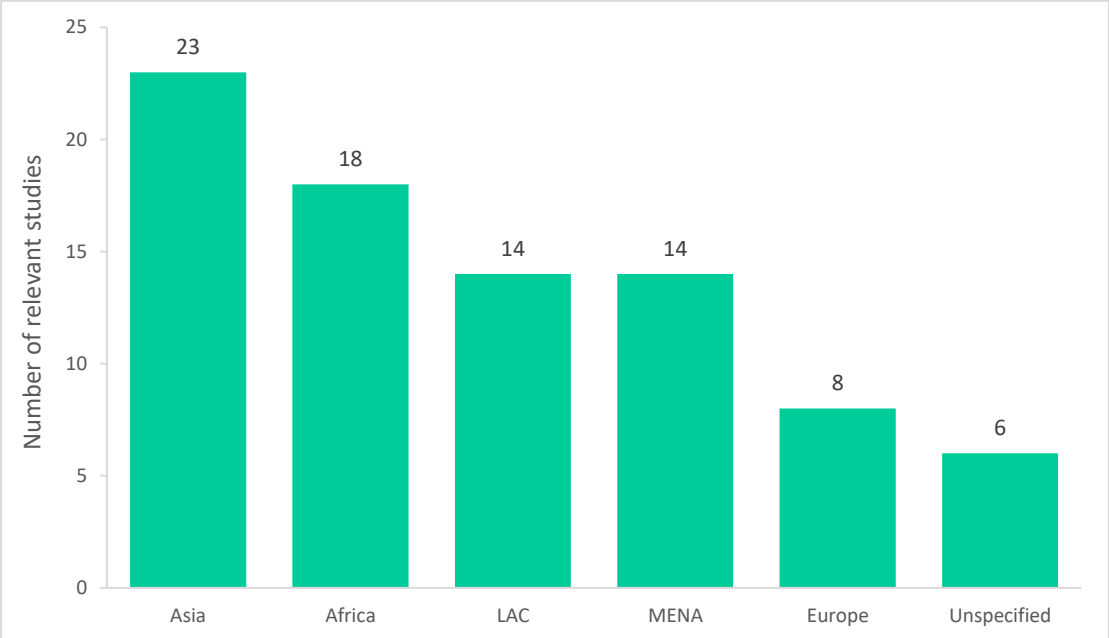
Income grouping: Of the 43 relevant studies, 21 include analyses of investments in a combination of countries classified as UMIC, LMIC and LIC. Four studies do not identify specific countries or regions where interventions have occurred. It is interesting to note that only two of the 43 studies focus solely on DFI interventions in LICs – one reports on DFI operations in Uganda and the other on energy investments in Senegal. Fewer DFI impact investment studies are undertaken in LICs (see Figure 4) – a research gap that could be bridged in future.

Figure 4. Income group coverage



Regional distribution: Many of the relevant studies cover DFI investments in multiple countries and regions. The target country or region of DFI investments is reported for 37 of the relevant studies, with most centred on Asia, Africa and LAC (see Figure 5).

Figure 5. Regional coverage



Note. Regional coverage is not mutually exclusive.

Table 10 provides a breakdown of the 23 studies that address DFI investments in Asia or Asian countries and the 18 studies that analyse investments in Africa or African countries.

Table 10. Asian and African coverage

	Number of studies
Asia (general)	9
India	6
Sri Lanka	4
China	3
Pakistan	2
Southeast Asia (general)	1
South Asia (general)	1
Bhutan	1
Philippines	1

	Number of studies
Africa (general)	9
Sub-Saharan Africa (general)	3
Ghana	3
Kenya	2
Uganda	2
Zambia	2
Senegal	1
Tanzania	1

Note. Coverage is not mutually exclusive.

Methodology: There are several methodological approaches to examining the impact of DFI investment, which are briefly discussed in Box 1. Of the 43 relevant studies, 25 have used a qualitative approach (58%), 8 have used mixed methods (19%) and 10 have used quantitative analysis (23%) (see Figure 6 for a breakdown). Among the qualitative studies, 12 are evaluations that focus on how broader mandates or financial instruments have made an impact over a certain period. Case studies were written by either the IFC (four of seven studies) or by a firm contracted by the DFI (three of seven studies) to get a better understanding of the impact of a specific investment. The other qualitative studies provide specific in-depth analysis of trends in DFI investment, for example, the gender impacts of DFI investment. The bulk of the quantitative studies use econometric models to estimate the socioeconomic impacts of DFI investment and the impact of energy investments on job creation. The utility, pros and cons of the most common methodologies are discussed in Annex C.

Box 1. Methodological approaches to assessing the impact of DFI investment

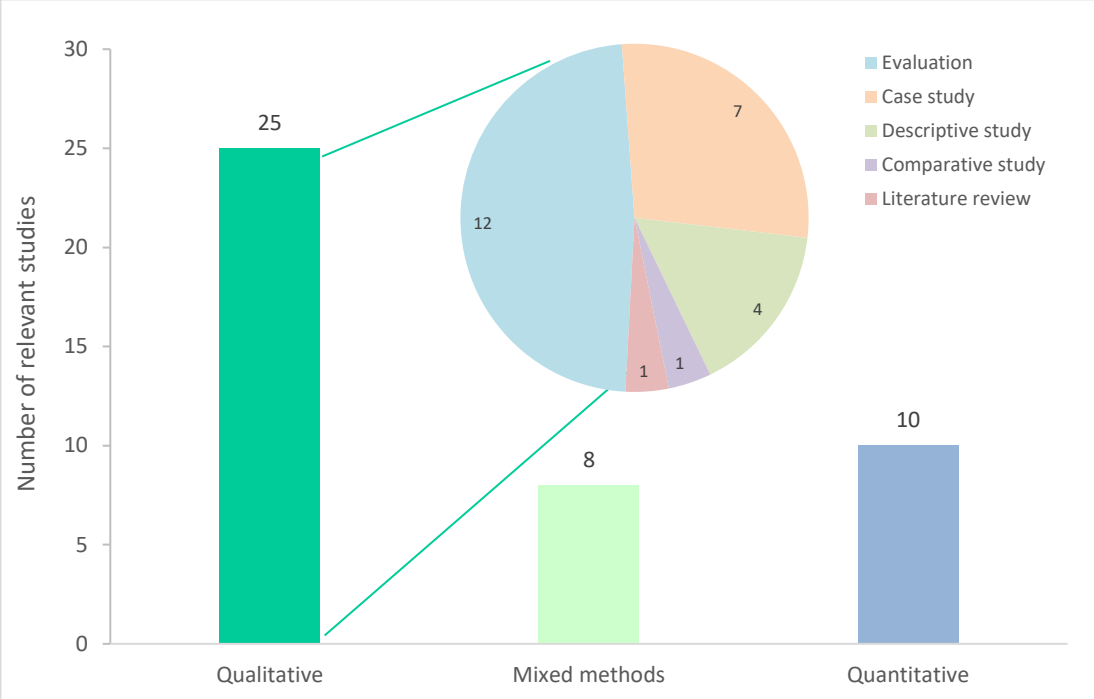
DFIs use their finance and other activities to raise the volume of investment (and, ultimately, gross fixed capital formation) or to improve the quality of that investment, compared with what would otherwise have been the case. Outcomes such as higher investment could lead to the creation and destruction of jobs, a change in production efficiency, or a change in the costs, reliability and availability (or access to) of financial, transport or energy services.

A variety of approaches are used to assess the impact of DFIs in (parts of) such areas. These include micro-level surveys, micro-level case studies, econometric studies and macro-econometric studies. There are also (quasi-) experimental studies, including randomised control trials (RCTs), e.g. in microfinance. Micro studies are a useful technique because they make it is easier to understand the mechanisms, however they often only measure partial relationships (e.g. job creation or productivity-enhancing effects, but not job destruction or market-stealing effects).

Macro-econometric studies combine a range of effects and can be used to estimate net changes in outcome variables, but often, it is not possible to exactly tease out individual mechanisms. For example, there is quite robust evidence that DFI activity is correlated with higher labour productivity across countries and over time, but this could be because DFIs locate in higher-productivity areas or because they genuinely lead to better outcomes. Some macro studies use instruments to account for the former.

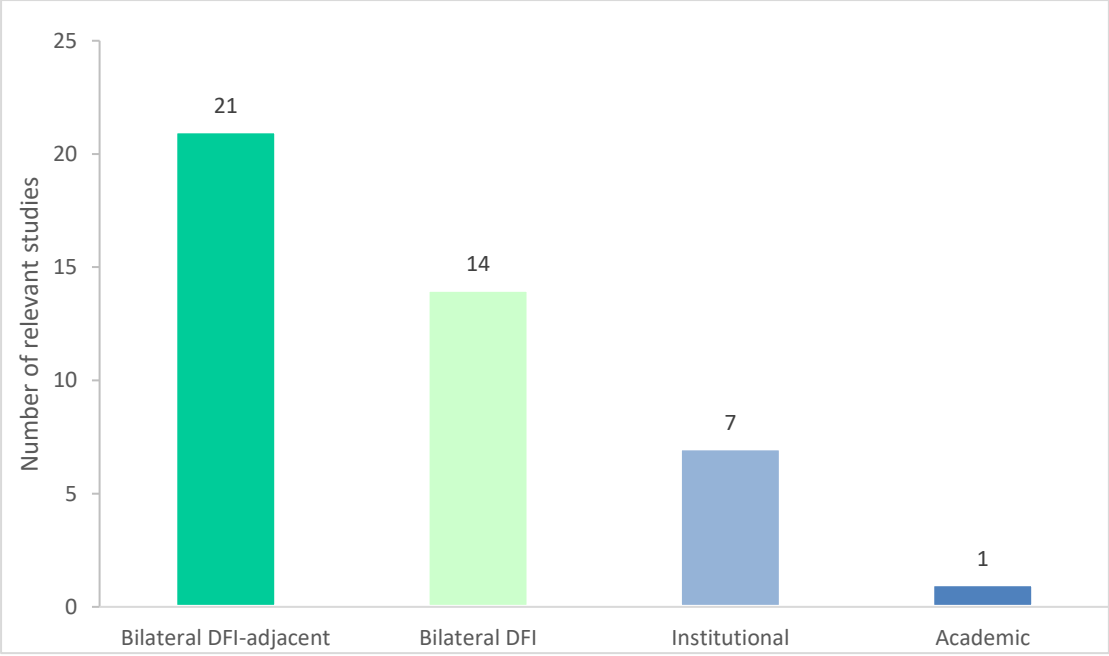
Much of the DFI literature does not acknowledge the counterfactual (i.e. this includes RCTs in uncontrolled economic conditions and any subjective method, such as interviews). Ideally, the evidence should be bought together. In this context, macro-econometric studies are very important complements to (but never complete substitutes for) case studies, which cannot allow for multiple factors. Each method has pros and cons that need to be understood.

Figure 6. Method of analysis



Authorship: Despite eliminating the DFI annual reports from our analysis, in agreement with DFID, the relevant studies for this REA remain largely based on data from DFIs, or on access to interlocutors provided by DFIs. For this reason, it is unsurprising that 35 of the studies are authored by the DFIs themselves, or by third-party organisations that have been contracted by the DFIs (so-called bilateral DFI-adjacent studies). Considering the privacy concerns frequently cited by DFIs, this reliance is unlikely to change soon.

Figure 7. Number of sources by author type



3.3 THEMES

As with the organising framework for our synthesis in Section 4, we have divided the literature according to the following three questions:

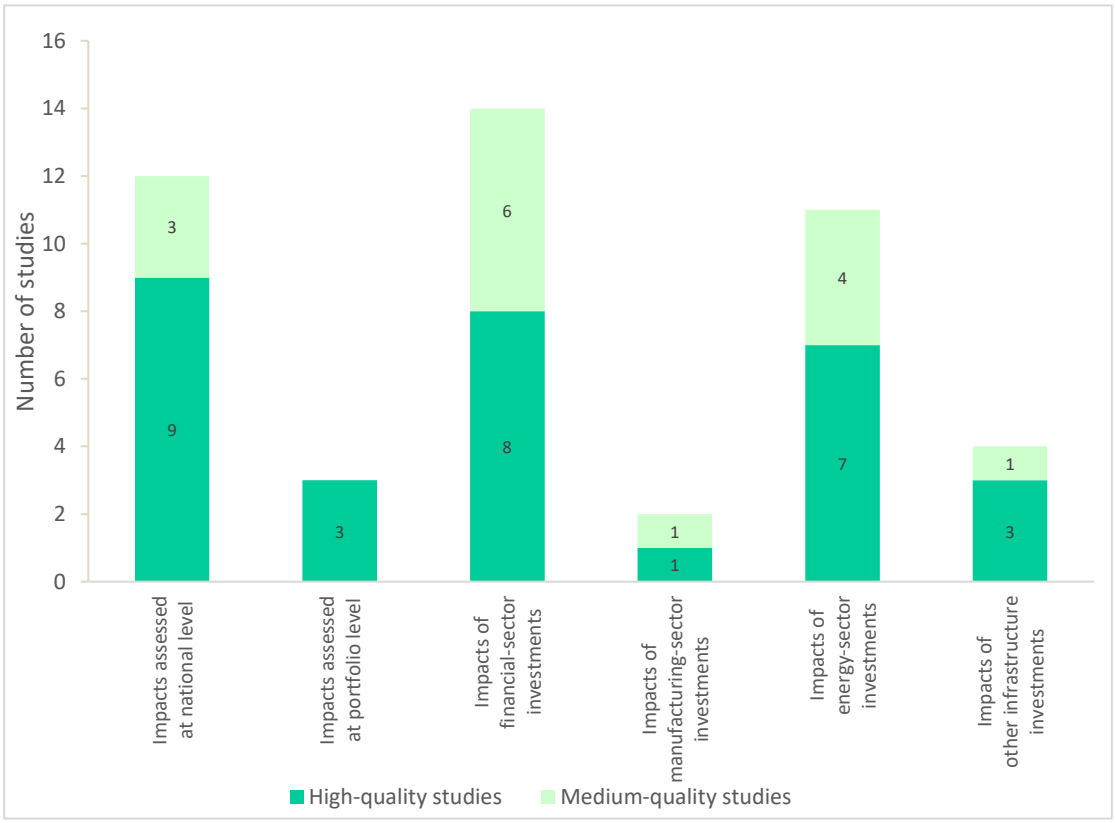
- What are the DFI investment impacts on income through employment effects?
- What are the DFI investment impacts on access to goods and services?
- What are the distributional impacts of DFI investments?

We have then broadly divided each of these questions into five sub-themes:

- Impacts at the aggregated level (national- and portfolio-level studies)
- Impacts of financial-sector investments
- Impacts of manufacturing-sector investments
- Impacts of energy-sector investments
- Impacts of other (non-energy) infrastructure investments

Figure 8 illustrates the breakdown of the quality of the literature by sub-theme. It shows that from a sub-thematic point of view, REA qualifying evidence is more widely available for DFI investment impact assessments that look at national-level impacts than at a DFI portfolio level. For sectors, meanwhile, there is a greater prevalence of energy- and financial-sector impact studies than for manufacturing and non-energy infrastructure studies.

Figure 8. Range of evidence by sub-theme and quality



Note. Of the 43 studies included, one was discussed across four different sub-themes.

3.4 LIMITATIONS

There are two main limitations of this REA methodology: one that is common to most REAs and one that is unique to studies of DFIs. The first common REA limitation relates to search techniques, expert consultations and snowballing. The search strings provide a clear and replicable process, but may have omitted terms that might have produced relevant results. Similarly, the experts consulted may have omitted studies of which they were either unaware or were not at liberty to share. This inability to share internal reports was mentioned by at least one expert. Moreover, whenever snowballing is completed, it is impossible for another researcher to replicate the process because a formal process does not exist.

However, DFI studies are also limited by the data from which they draw their conclusions. Most DFIs report annual figures on their financials and the impact metrics they track, but these impact metrics are rarely independently verified. The studies that do allow further analysis of a specific investment or mandate are done so at the direction of the DFI. Studies that provide comparative analysis among DFIs are reliant upon publicly released annual reports, with little insight into how each DFI precisely accounts for their impact. While this REA has not included annual reports released by DFIs, the studies that have been included rely on these reports or specific access provided by DFIs – a fact that undermines the independence of these works.

In addition, as noted in Box 1, it is very difficult to create a counterfactual against which to evaluate impact. RCTs have not yet taken hold in the DFI literature. Reasons for this may be similar to those cited in a recent article by Dalziel (2018) when writing on government-funded business support programmes (BSPs): RCTs require random allocation of support, relatively homogenous treatments, and large sample sizes when outliers are present. In contrast, BSPs, or similarly DFIs, select firms based on their potential and amenability to support, provide customised support, and aim to produce outliers – firms with exceptional performance.

4. THEMATIC SYNTHESIS

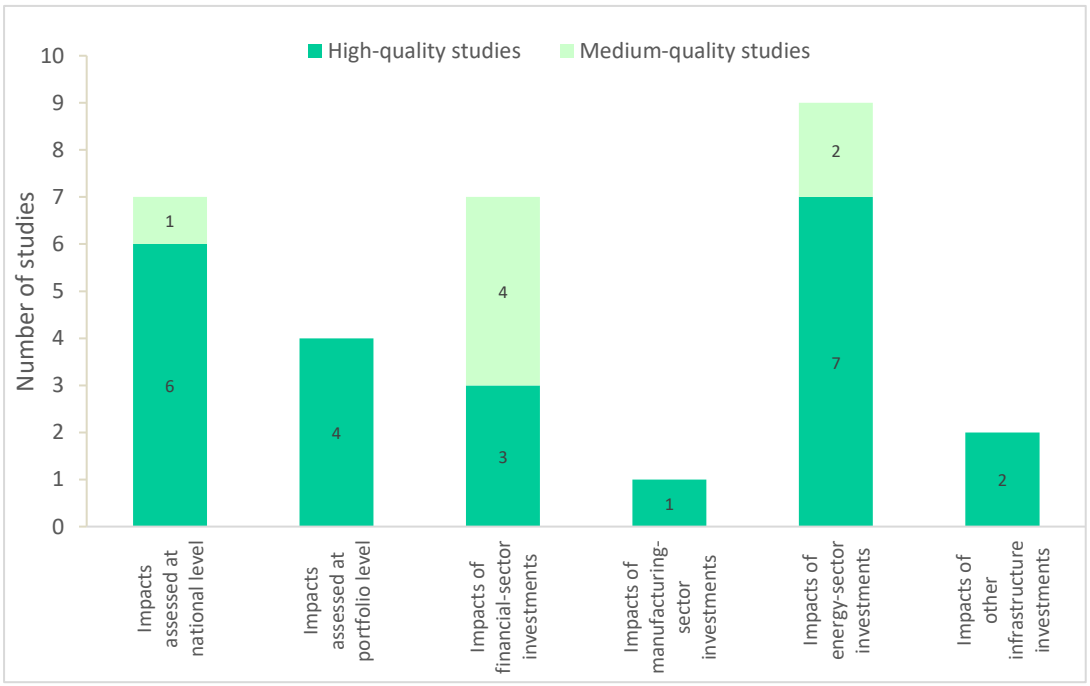
Here, we look at the body of literature according to the three components of the research question in turn. For each, we begin with a brief discussion of the state of the evidence and then examine the five sub-themes described previously in Section 3.2.

4.1 DFI INVESTMENT IMPACTS ON INCOME, THROUGH EMPLOYMENT EFFECTS

4.1.1 STATE OF THE EVIDENCE

Overall, there is **strong evidence that DFI investment creates jobs, which can in turn lead to increased incomes.** Our decision to focus on income through employment, rather than income alone, is down to the fact that employment data are far more prevalent in the DFI literature than income data. Moreover, as many of the direct jobs created by DFI investments are in the formal sector, we can assume that incomes increase as workers either move from employment in the informal sector to newly created jobs, or move from unemployment (El Badaoui et al., 2010). Studies that assess employment effects at the national and portfolio level find evidence of direct and indirect job creation, while studies at the sectoral level find evidence that financial-sector and energy-sector investments also create jobs.

Figure 9. Employment impacts: range of evidence by sub-theme and quality



Note. One study was discussed in three different sub-themes and was counted three times. Therefore, the total number of articles discussed in Section 4.1 is 28.

4.1.2 NATIONAL- AND PORTFOLIO-LEVEL EMPLOYMENT IMPACTS

NATIONAL-LEVEL IMPACTS

Studies at the national level show that DFI investments directly and indirectly create jobs in the formal sector, but the evidence is limited. There are six high-quality observational studies that assess DFI impacts on formal employment at the national level, but these studies do not constitute a strong evidence base. The studies indicate that DFI investments have both a direct employment-generating impact (which is evaluated by simply counting new jobs) and an indirect employment impact.[12] However, there is no set ratio between these two types of employment, nor is it possible to understand if these employment impacts are high or low, as there is no counterfactual against which they can be compared.

In a high-quality qualitative analysis of the employment impacts of its portfolio, the IFC (2013) presents four macro case studies that estimate the number of jobs created per $1 million invested by the IFC: 31 (Jordan), 116 (Ghana), 247 (Tunisia) and 650 (Sri Lanka).[13] The IFC posits that investment in business-environment reform (BER) stimulates employment by encouraging competition and FDI inflows, which raise productivity and create jobs. The analysis finds that expenditure of $23.5 million on BER created approximately 50,000 new jobs in Burkina Faso, Liberia, Rwanda and Sierra Leone from 2008 to 2010.[14]

The other high-quality observational study using a production-function analysis (Jouanjean and te Velde, 2013) finds that six multilateral and bilateral DFIs created a total of 2.6 million direct and indirect jobs in developing countries in 2006. Using a panel of 62 developing countries over periods of 6 to 11 years, the investments also increased labour productivity by at least 3% in 21 developing countries and by just over 2% in 3 developing countries.[15]

[12] We provide a breakdown of the most common methodologies used to estimate direct and indirect employment effects in Annex C, including the pros and cons of each.
[13] The IFC study draws on four high-quality reports prepared by Kapstein et al. (2012a, 2012b, 2012c, 2012d) of Steward Redqueen, an international consultancy firm, on behalf of the IFC, using IFC-provided client data, as well as a high-quality summary document of these (Oikawa et al., 2012). These are observational studies, each employing the same clear and robust methodology: an input-output matrix, the strengths and weaknesses of which are explicitly stated by the authors.
[14] The underlying BER study report is not publicly available and the evaluation methodology not stated in the main report, so the validity of these results cannot be properly assessed.
[15] DFI data were provided to the study by individual DFIs, making it hard to replicate and independently verify results. Labour productivity data were sourced from publicly available databases. The methodology and results are clear and replicable, given the correct data.

PORTFOLIO-LEVEL IMPACTS

Portfolio-level studies show that DFI investments create employment, but the body of evidence is limited. A limited number of studies show that DFI investments create direct and indirect employment, but this finding comes with some significant caveats. The studies wholly depend on data from the DFIs. Moreover, the findings are all based on data observations, which means that there is no clear baseline against which results can be compared.

A high-quality observational paper (Dalberg, 2010) analysing investments by members of the Association of European Development Finance Institutions (EDFI) between 2006 and 2008 finds that an average of €5 billion per year was invested by EDFI members. This created approximately 500,000 direct and 1.3 million indirect jobs per year. This translates into a multiplier of approximately 0.08 direct and 0.27 indirect jobs for every €1,000 invested.[16] However, these impacts also include minority EDFI investments, so the employment-creation impacts cannot be fully attributed to EDFI investments.

Two high-quality reports focus on CDC investments at the portfolio level and provide robust evidence that these have resulted in direct and indirect employment creation. The first study, an observational evaluation, uses both fund-level and company-level data on CDC's equity fund and finds that CDC investee businesses created at least 345,000 direct jobs between 2008 and 2012 (Lerner et al., 2013). The other CDC-focused, high-quality quantitative assessment (MacGillivray et al., 2017) estimates that for every direct job created by a CDC investment, 7.8 indirect jobs are created.[17]

A high-quality observational quantitative assessment by Spratt et al. (2018) finds little employment impact, either positive or negative, from Swedfund's investments. The ex ante assessment component of this study finds that Swedfund's focus on lower-income African countries and its higher proportion of manufacturing and infrastructure investments has a strong potential poverty-reducing impact. The ex post component of the evaluation finds that,

[16] The report does not provide an independent methodology to calculate how indirect and direct employment is generated by investments.

[17] The study uses the CDC's methodology for evaluating the employment effects of its investments and adopts the 'lean data' approach to measuring employment impacts, where pre-elaborated multipliers are applied to basic headcount and financial data from CDC-supported businesses to calculate the number of direct and indirect jobs supported by CDC investments. It is important to note that the method relies on the appropriate calculation of multipliers, which seem to be based on robust theoretical and analytical grounds. Appropriate caveats are applied when estimating indirect employment effects to ensure that the disadvantages associated with using their (self-elaborated) multipliers to calculate employment are mitigated as much as possible.

while Swedfund's older equity investments have not contributed to employment creation, its newer direct investments in Africa are more likely to have generated employment. Loan investments seem to have a higher employment-generating capacity than equity investments.

4.1.3 FINANCIAL-SECTOR EMPLOYMENT IMPACTS

DFI investments in the financial sector create jobs, but the evidence base is limited. Existing access-to-finance impact assessments tend to focus on SME[18] finance programmes where the DFI provides support to a local bank to expand its SME lending portfolio. Three high-quality (IFC, 2013 and 2014a; Khanna and Kehoe, 2017) and three medium-quality papers (IEG, 2013a; Koptya and Domenech, 2015; IADB, 2017) report that SME fund beneficiaries have directly created new jobs and have grown. Another medium-quality paper finds that blended-finance instruments, supported by DFIs, have employment-generating impacts (WEF, 2016). The specific effects on employment vary significantly by country, type of investment, study methodology, etc.

Three studies report employment growth among SMEs that received support from SME finance programmes, although figures vary widely by context. In one case, IFC investments in growth equity funds resulted in an estimated annual employment growth rate for SMEs of 14.7% (IFC, 2013). In the other two, an estimated annual employment growth rate of 13% was the result of IFC investment in Lebanese Fransabank (IFC, 2014a), while IFC investments in a Latin American bank led to 2.7% annual job growth (Koptya and Domenech, 2015).

In terms of the number of jobs created, estimates also differ between studies. CDC investments in SME loan financing in India from 2013 to 2015 created an estimated 1 to 1.5 direct jobs per $100,000 invested[19] (Khanna and Kehoe, 2017); IFC investments in Lebanese Fransabank from 2006 to 2013 created 0.18 SME full-time jobs per $100,000 invested[20] (IFC, 2014a), and IFC support for a Sri Lankan micro, small and medium-sized enterprise (MSME) loan programme created between 10 and 31 direct jobs per $100,000 invested (IFC, 2013). The same IFC report provides an additional example in Afghanistan, where the IFC invested $1 million in First MicroFinanceBank Limited (FMFB) in 2002, followed by another $1 million in a second microfinance bank, BRAC Afghanistan Bank, in 2006. It is estimated that this support helped FMFB to create 1,000 jobs and enabled BRAC Bank to lend to 4,294 enterprises. The World Economic Forum's (WEF, 2016) report on blended-finance funds estimates that blended investments generated approximately 8.7 jobs per $100,000 invested.[21]

Another report provides two examples of employment impacts related to a $20 million IFC investment in a China-focused venture fund with a total capitalisation of $210 million (IEG,

[18] There is no given standard definition of what constitutes an SME across the included studies.
[19] Calculated based on a figure of approximately 10 to 15 jobs per $1 million investment.
[20] Calculated based on a figure of approximately 473 jobs following $260 million investment.
[21] Calculated based on a figure of approximately 87 jobs per $1 million investment.

2013a). The number of employees in a Chinese financial-services outsourcing company grew from 350 in 2006 to 2,737 in 2010, while the number of jobs in a Chinese video-on-demand company increased from 35 in 2007 to 600 in 2012. The scale of the fund's investment in the firms is unknown.

Relying on IFC data from 2000 to 2010, a report by the Inter-American Development Bank (IADB) outlines IFC's claim that equity investments in large firms created more jobs (about 239,000 more) than investments in SMEs, and also received the majority (67.5%) of IFC's $4 billion equity investment that decade (IADB, 2017). The report also states that DFIs were able to provide access to market intelligence and industry contacts for equity investees, although specific evidence to support this is lacking.

On the whole, there are some limitations to these studies. Increased employment cannot be solely attributed to investments, as companies may also have access to other sources of finance (IFC, 2013; WEF, 2016). Moreover, selection bias may also be present and may mean that the firms selected to receive loans were already in better financial standing and, therefore, in a stronger position to grow (IFC, 2013; Koptya and Domenech, 2015). It is also noted that not all studies differentiate between direct and indirect jobs created (IFC, 2013), and net employment effects (e.g. competitor job losses) are not considered (Koptya and Domenech, 2015).

4.1.4 MANUFACTURING-SECTOR EMPLOYMENT IMPACTS

There is no evidence of DFI investments having an impact on manufacturing-sector employment. With only one high-quality study included in the findings, the body of evidence is too small to confidently ascertain any impact. The relevant IFC (2013) report looks at several manufacturing-focused firm-level case studies. Two of these case studies show that the IFC estimates that for every $1 million invested, between 1.5 direct and 40 indirect jobs were created in a cement factory in India and between 6 direct and 40 indirect jobs were created in a dairy plant (also in India). Two more firm-level case studies report that at an Indonesian alcohol-producing company, IFC investments contributed to 177 direct jobs and an estimated 3,646 indirect jobs from 2005 to 2013, while at two steel-production plants in Kenya and Tanzania, 2,450 direct and 24,000 indirect jobs were created from 2007 to 2013 (ibid).

4.1.5 ENERGY-SECTOR EMPLOYMENT IMPACTS

DFI energy investments are associated with increased employment and GDP growth, but the evidence base is limited. Four high-quality national-level DFI investment impact studies (Steward Requeen, 2015, 2016a, 2017a and 2017b) and three high-quality individual investment papers (Dalberg, 2012; Datta et al., 2012; Scott et al., 2013) indicate that investments in power supply and power transmission have had positive direct, indirect and induced employment impacts. The indirect and induced effects are significantly larger than the direct impacts, although it is important to consider the potential over-estimation of indirect and induced employment effects. For induced effects, the research posits that employment is created via increased energy generation that results in lower electricity prices

and more reliable electricity supply, which enables an increase in production time and output and ultimately creates employment and increases GDP. Two medium-quality studies find similar impacts (Adam Smith International, 2015; FMO, 2015).

A high-quality analysis of Proparco's portfolio finds that €655 million in renewable energy investment generated 3,866 megawatts (MW) of energy (Steward Redqueen, 2016a). This increased generation is estimated to have contributed to an additional €1 billion in GDP and the creation of 218,000 jobs. Attributable to Proparco are 409MW of energy, a contribution of €111 million to GDP and 21,000 jobs. An in-house evaluation by the Netherlands Development Finance Company (FMO) estimates its energy portfolio to have supported the creation of 106,000 direct and indirect jobs from 2009 to 2014 (FMO, 2015).

For specific country-level investments, various impacts have been found:

Asia

- In India, Proparco invested in a 110MW power plant that reduced firm outage time by 0.003%. The high-quality analysis found that the increase in production time led to an increase of €6.4 million in GDP and the creation of 2,339 jobs. The construction of the power plant also led to growth of €5.3 million in GDP and the creation of 1,747 jobs. As 5.6% of the increase is attributable to Proparco's investment, Proparco contributed to an increase of €0.7 million in GDP and the creation of 241 jobs (Steward Redqueen, 2016a).
- For IFC energy investments in the Philippines, a high-quality analysis finds that every 1MW of energy produced added $1.86 million to GDP and created 226 jobs (Steward Redqueen, 2015). It is estimated that each $1 million of DFI investment generated $0.68 million in GDP and created 83 direct and indirect jobs.
- In Bhutan, a high-quality study finds that an IFC loan of $75 million in 2003 to a power transmission company supplying India led to the creation of an estimated 44,000 direct, 55,000 indirect and 144,000 induced jobs over the course of 25 years (Datta et al., 2012). The study also states that there will be positive GDP impacts in both Bhutan and India, as well as potential poverty-reduction effects on households affected by the power-transmission construction process.
- A medium-quality study finds that investments by InfraCo Asia Development[22] in a hydroelectric power plant in Vietnam ($49.9 million), a wind power plant in Pakistan ($131.5 million), and a salt farm in Cambodia ($2.9 million) resulted in 1,350 jobs created during the construction phase and 410 jobs created to support the projects once operational (Adam Smith International, 2015).

[22] A project set up by Private Infrastructure Development Group (PIDG) in 2009.

Sub-Saharan Africa

- In Senegal, a high-quality study finds that the decrease in energy prices that resulted from power investments from the Private Infrastructure Development Group (PIDG) led to an estimated $434.5 million increase in GDP (1.7% of GDP) and created approximately 68,500 jobs (mostly indirect and induced) (Steward Redqueen, 2017b).
- In Uganda, a high-quality study estimates that PIDG's investment in the Bugoye Power Plant contributed 1,079 direct jobs, 191–199 indirect jobs and 8,434–10,256 induced jobs (Scott et al., 2013).
- In Zambia, a high-quality impact evaluation of three energy projects supported by multiple EDFI members finds that the Copperbelt Energy Corporation recorded growth in employment of 6% and an increase in salaries (in line with inflation) for all workers (Dalberg, 2012).
- In Kenya, the same evaluation estimates that the DFI-supported Kenyan Olkaria III plant supports approximately 190,000 indirect jobs, while the Rabai plant supports 256,000 indirect jobs.

Middle East and North Africa

- In Turkey, a high-quality study finds that IFC investments of approximately $1.7 billion in the energy sector since 2008 contributed to an increase of between 0.01% and 0.03% in Turkish GDP. The investments helped to sustain between 5,195 and 14,390 jobs in 2015 (Steward Redqueen, 2017b).

Latin America

- In Uruguay, a high-quality study finds that Proparco's investment in a 50MW power plant reduced user electricity prices by 1.3%, leading to an increase of €3.3 million in GDP and the creation of 169 jobs (Steward Requeen, 2016a). The construction of the power plant also led to the an additional €3.3million value added and 157 additional jobs. Proparco's contribution is estimated at 30% of the total impact, hence an increase of €2 million in GDP and the creation of 98 jobs.

Again, there are limitations to the studies presented here. Direct and indirect employment figures are often not disaggregated. The medium-quality studies do not provide clarity on how employment impacts were calculated. Some research relies on primary data and cannot be easily replicated (Scott et al., 2013). Moreover, DFI investment may not have been the sole driver of a given impact. For example, growth in the number of employees at an energy plant could plausibly be attributed to its acquisition by new owners, thus was facilitated by DFI investment, but not solely attributable to it (Dalberg, 2012).

4.1.6 EMPLOYMENT IMPACTS FROM OTHER INFRASTRUCTURE

As only two high-quality studies show employment impacts of non-energy infrastructure investments, **we can state that the evidence is limited, but inconsistent in observing employment impacts**. While one of the two high-quality case studies does show that DFI

investment created employment growth, the second paper provides two examples of impact that are not fully in agreement and hence cannot be considered conclusive.

Goldblum et al.'s (2015) high-quality case study examines the IFC's provision of financing to Indian financial institution Au Financiers, which then provides finance to small road-transport operators and MSMEs, as well as for housing in the low-income states of India. The study looks at 128 active MSME and commercial-vehicle clients who received a loan of between INR 500,000 and INR 2.5 million. The assessment finds that employment in the sample firms grew by approximately 11% per year, while sales grew about 6% and incomes 5%.

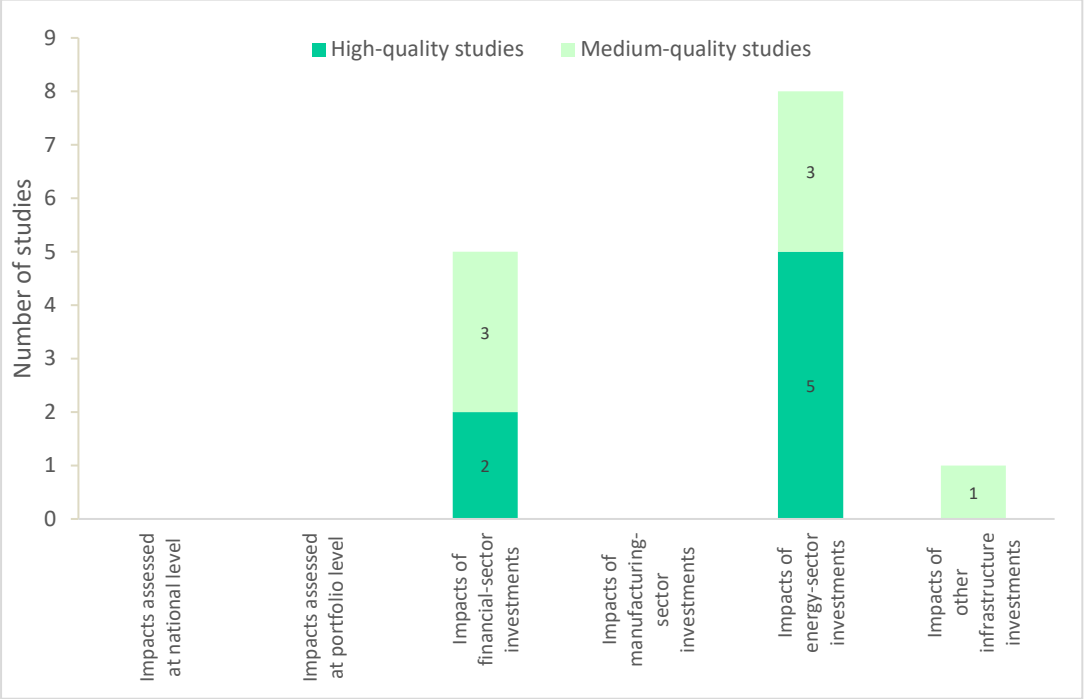
A high-quality case study from Oxford Economics (2016) explores the economic impacts of IFC airport investments in Montego Bay Jamaica (MBJ) Airport and Punta Cana International Airport (PUJ) in the Dominican Republic. The study estimates that the IFC investment in MBJ may have supported 29,000 (direct and indirect) jobs and helped increase Jamaican GDP by $288 million. The impact of IFC's investment on PUJ airport is not clear, however, nor are any changes at PUJ clearly attributable to it.

4.2 DFI INVESTMENT IMPACTS ON ACCESS TO GOODS AND SERVICES

4.2.1 STATE OF THE EVIDENCE

The overall body of literature **provides moderate evidence to suggest that DFI investments increase access to goods and services** (i.e. utilities, such as water and energy). However, when broken down, we find that most of the evidence stems from the energy and financial sectors, with limited to no evidence on other types of goods and services in manufacturing or other infrastructure investment (see Figure 10).

Figure 10. Impacts on access to goods and services: evidence by sub-theme and quality



4.2.2 FINANCIAL-SECTOR IMPACTS ON ACCESS TO GOODS AND SERVICES

There is a **limited amount of evidence suggesting that finance-sector DFI investments have increased access to finance**, but it is inconsistent, so definitive conclusions cannot be drawn.

A high-quality report from Horus Development Finance (2014) looks at DFI support to financial institutions in Africa in an effort to understand how access to finance promotes SME growth. It finds that DFI investments have not led to a particularly noticeable expansion of credit to SMEs and suggests that the conservative and prudent nature of the financial institutions involved is the main reason. In evaluating the financial intermediary operations of IADB Group, Alcantara and Funes (2016), in their medium-quality report, find that most DFIs are focused on financing for SMEs, but that some DFIs are shifting some investment with financial intermediaries to market niches (to non-bank financial institutions and microfinance, for example). The study notes that most DFIs have strategic goals to increase access to finance, but does not evaluate them.

On a larger scale, the Global Trade Finance Program (GTFP) was set up by the IFC in 2005 to help increase the supply of trade finance to underserved clients. The Independent Evaluation Group's (IEG) (2013b) high-quality evaluation of the GTFP finds that the programme has been effective at expanding the supply of trade finance, especially in LICs. The study finds that IFC has issued nearly $4 billion in trade guarantees for LIC banks since its inception. The programme has helped connect local trade-financing institutions with international trade-focused financial institutions. It is theorised (but not confirmed) that approximately 80% of the IFC-supported GTFP finance goes to SMEs.

Two medium-quality papers also suggest that DFIs provide access to finance in other areas: private equity and entrepreneurial capital. Gabriel (2013) notes that many DFIs played a countercyclical role following the 2008 global financial crisis by backing new private equity funds when private investors proved reluctant. The author argues that this increased DFI influence has improved the standards and norms of the local industry in which DFI-funded private equity invests. For its part, the IEG (2013a) assessed approximately 300 innovation and entrepreneurial projects supported by the IFC and found that the projects represented $4.9 billion in loans and $0.8 billion in equity investments. Two-thirds of these projects were concentrated in China and India.

4.2.3 ENERGY-SECTOR IMPACTS ON ACCESS TO GOODS AND SERVICES

There is modest evidence that DFI investments in the energy sector have increased energy supply, but there is limited evidence that this has increased access to electricity by consumers. It is clear that DFI investments in energy all add to the installed energy base at country level (Dalberg 2012; Scott, et al., 2013; Steward Redqueen, 2015, 2016a, 2017a, 2017b), although there are issues regarding how much of this can be attributed to DFI investment. While there is some evidence that the increase in energy provision reduces energy prices and improves the reliability of the energy supply (Steward Redqueen, 2015 and 2017a), there is no strong evidence that this has increased consumer access to electricity (households or firms). Several high-quality studies illustrate such findings in different contexts.

Proparco's renewable energy portfolio supported the generation of 3,866MW of energy, of which 409MW could be solely attributable to the French development agency (Steward Redqueen, 2016a). Specific investments facilitated the installation of an additional 50MW power base in Uruguay, helping to reduce user electricity prices by 1.3%, and an additional 110MW in India, reducing firm outage time by 0.003%. DFI investments in the Philippines accounted for approximately 400MW of power generation, or 2.9% of Filipino energy production (Steward Redqueen, 2015).

In Turkey, IFC investment was behind approximately 4.4% of Turkey's energy generation capacity in 2010–2015, helping to reduce consumer energy tariffs by around 2.42% over that period (Steward Redqueen, 2017a). In Senegal, Uganda, and Kenya, DFI energy investments accounted for 13% of Senegalese generation capacity (Steward Redqueen, 2017b), supplied approximately 2.9% of Ugandan energy between 2009 and 2012 (Scott, et al., 2013), and increased Kenyan power generation by 39MW (Dalberg, 2012).

These specific findings are supported by estimates from two medium-quality studies. An evaluation of FMO's (the Dutch development bank) energy investment portfolio between 2009 and 2014 finds that 21 projects were producing a total of 10,353 Gigawatt hours (GWh) of energy per year (FMO, 2015). Furthermore, the FMO's Access to Energy Fund provided between 0.6 million and 3.8 million people with access to energy – based on the report's own calculations from 15 case studies (Slob et al., 2017). The data provided by FMO are deemed to be highly inconsistent, hence the considerable variation in estimated coverage.

Lastly, a medium-quality evaluation (Löwenstein, 2012) finds that investments in an energy project in Sri Lanka, which conducted corporate social responsibility (CSR) activities in the local community, allowed residents to connect their houses to the new water grid (at a limited charge) – a big improvement on previous water supply from wells or rivers. Income from agriculture and other productive activities (day labour, small-scale craft, trade, etc.) increased, as farming households could irrigate their small plots and save the labour time required to fetch water. Beneficiaries of this better access to water saw their incomes exceed those of non-beneficiaries by 25%. However, the study does not say whether these conclusions were region- or DFI-specific, nor does it consider the limitations of the analysis in any depth.

4.2.4 IMPACTS ON ACCESS TO GOODS AND SERVICES FROM OTHER INFRASTRUCTURE

There is no evidence that DFI investments in non-energy infrastructure have an impact on access to goods or services.

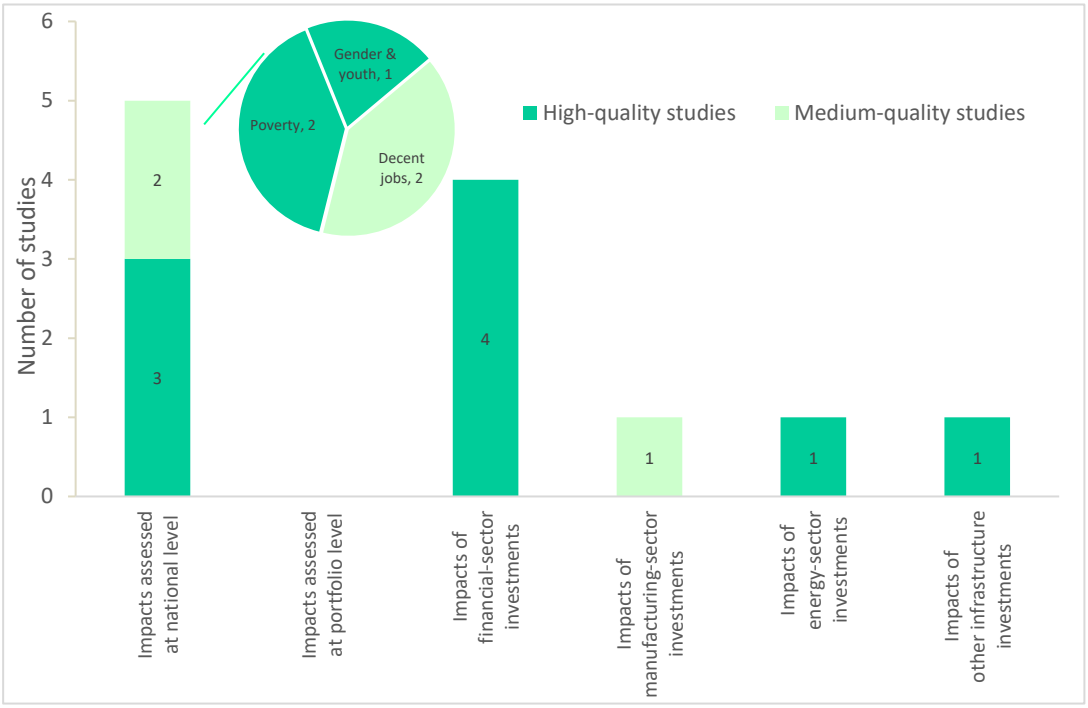
One medium-quality report shows that investment by DEG (German Investment Corporation) has helped to provide CSR-type services to certain communities (Dalberg, 2014). An Indian infrastructure company in which DEG invested was able to employ its infrastructure know-how to advance community-building. One example cited by the authors is the investee company constructing ponds to give the communities along a toll road access to water. This led villagers to report a 69% increase in year-round availability of water close to villages. In addition, by deepening the ponds, the investee company improved access to drinking water. The authors discuss other ways of raising the bar on CSR ambition, but not how these activities may increase incomes or create jobs.

4.3 DISTRIBUTIONAL IMPACTS OF DFI INVESTMENTS

4.3.1 STATE OF THE EVIDENCE

Overall, there is only modest evidence to inform understanding of the distributional impacts of DFI investment on different segments of the population**.** The literature is thinly spread across these different segments, so there is no strong evidence base from which to draw conclusions on how DFI impacts affect poverty, gender, youth and quality of jobs (the only categories directly addressed in the literature).

Figure 11. Distributional impacts: range of evidence by sub-theme and quality



4.3.2 NATIONAL- AND PORTFOLIO-LEVEL DISTRIBUTIONAL IMPACTS

There is limited, inconclusive evidence of the distributional impacts of DFI investments at the aggregated (i.e. national or DFI portfolio) level.

Studies that look at the aggregated level show some distributional impacts. Overall, these studies show that DFIs tend to (at least partially) target their investments at what are assumed to be poverty-reducing sectors, though the actual impacts are not clear. Evidence on the gender and youth employment impacts, as well as quality of jobs at the aggregated level, is too limited to be able to draw concrete conclusions on the real impact.

POVERTY REDUCTION

Poverty-assessment studies show that while there is **limited evidence that DFIs channel funds to poverty-reducing investments, there is no evidence of actual poverty-reduction impacts**.

The studies suggest that, to the extent that DFIs actively focus on investment in poor countries and/or sectors with strong potential for poverty-reducing impacts, the impacts are assumed ex ante. There is no evidence of ex post evaluation, however.

A high-quality assessment of Swedfund's impacts (Spratt et al., 2018) finds that its ex ante focus (i.e. deciding where to invest) on lower-income African countries has strong potential for poverty-reducing effects. Similarly, the higher proportion of its portfolio invested in manufacturing and infrastructure also has strong (potential) poverty-reducing impact. While the study provides robust evidence that investments in these sectors could have poverty-alleviating effects, it does not provide an actual ex post assessment of poverty impact.

A high-quality assessment of IFC's focus on poverty (IEG, 2011) shows that portfolio commitments to IDA[23] countries increased steadily from $459 million in 2000 to $4 billion in 2010, accounting for 31% of IFC's total commitments. While the share increased, the report finds that commitments were highly concentrated in a limited number of countries – 59% in India, Pakistan, Nigeria and Vietnam as of 2010. Furthermore, investments were concentrated in targeted sectors – such as infrastructure, agribusiness, health and education – that were assumed to have significant impact on poverty. It states that the IFC was increasingly focused on SMEs, with a total commitment to SME support of $895 million as of 2010, although only 37% of these were in IDA countries. The paper does not provide actual ex post evidence of the poverty-reducing effects of IFC investments.

GENDER AND YOUTH

Overall, there is **not enough evidence to confidently identify the disaggregated gender and youth employment impacts of DFI investments**. The only relevant study is a high-quality evaluation of IFC's youth employment programmes (IEG, 2013c). It estimates the beneficiaries of IFC's 'Better Work' programmes to be between 70% and 90% female and 60% youth (15–30 years old). The number of jobs created is not specified, except for IFC agribusiness investment in India, which created 3,000 youth jobs. Other examples include an IFC activity in Yemen, which resulted in 45% youth placement, and IFC support for technical and vocational education training (TVET) programmes, which reached 1.5 million students in Latin America.

DECENT JOBS

There is **limited evidence of the impact of aggregated DFI investment on the creation of decent jobs**. There are only two medium-quality studies that look at the issue – one at the portfolio level and one comprising the lessons from three case studies. The studies report that

[23] The IDA is an international financial institution and member of the World Bank Group. It offers concessional loans and grants to 75 countries according to a relative poverty level, defined as having a gross national income per capita level below $1,145 (http://ida.worldbank.org/about/borrowing-countries).

DFIs, especially the IFC, take the issue of decent jobs into consideration when investing, but do not address the extent to which these investments have an impact.

A qualitative analysis presents the investment policies of 16 DFIs at the global, regional and bilateral levels with integrated labour provisions (Ebert and Posthuma, 2010). The paper finds that little is known about the practical application of these labour provisions, however, as much of the information is confidential. Relying on client surveys conducted by the IFC, the paper reports that 21% of clients considered the IFC's performance standards (of which labour standards are one element) to negatively affect their decision to collaborate with it.

A second study, commissioned by FMO and EDFI, notes that DFIs structurally support improvements to job quality by aiding the development of higher-value, higher-productivity sectors, which offer greater formal protections and skills-development opportunities to workers (Ergon Associates, 2019). However, the study also finds that DFIs face difficulties when attempting to monitor labour risks in foreign markets, that they may not have the leverage necessary to force higher labour standards, and that they may face a trade-off between the quantity and quality of jobs created. The paper suggests greater DFI engagement on labour standards is needed throughout the project life-cycle and that DFIs develop greater advisory capacity to work with investees to improve labour standards.

4.3.3 FINANCIAL-SECTOR DISTRIBUTIONAL IMPACTS

There is limited evidence that DFI investments in the financial sector have had a positive impact on female employment, not enough evidence to assess the distributional impact on youth and no evidence to assess the impact on the poor. Four of the five high-quality studies found in the body of literature point to greater levels of female employment in SMEs supported by DFI investment, with the proportion of new jobs going to women ranging from 24% to 85% of jobs. Only one high-quality study shows a significantly lower level of female employment representation.

The IFC (2013) states that in a case study of 37 SMEs that received loans from an IFC-supported bank in Latin America, 85% of jobs created were for women, with a 6.9% annual growth rate in female employment (Koptya and Domenech, 2015). The annual growth rate of youth employment (4.4%) within the sample firm size was also higher than the sample's general employment growth average. Similarly, an Indian bank's SME lending programme, backed by CDC, led to employment growth in supported firms of an average 6% per year. Some 24% of those new jobs were for women (Khanna and Kehoe, 2017).

An IFC (2014b) report analysing a sample of 113 SMEs that in 2009 obtained loans from Habib Bank Ltd (HBLs), an IFC client bank from Pakistan, finds that the SMEs exhibited 9.7% annual growth in employment between 2009 and 2012, creating a cumulative 1,170 full-time jobs, of which 63 were for women and 224 were for youths. Another IFC (2014c) case study, which saw the IFC provide a $65 million loan (in conjunction with advisory services) to the Commercial Bank of Ceylon in Sri Lanka for SME lending, finds that these SME borrowers created 2,650 permanent jobs over a three-year period (50% of them for women), corresponding to 12% annual employment growth, above the national average of 4.8%.

4.3.4 MANUFACTURING-SECTOR DISTRIBUTIONAL IMPACTS

There is no evidence of the distributional impact of DFI manufacturing investment. Only one medium-quality report from the Asian Development Bank (ADB) (2016) explores female employment rates. It cites an IFC-supported manufacturing firm in Sri Lanka with a 70% female workforce (out of 72,000 employees); an Indo-Cambodian ADB-supported agribusiness that employs 70% women (out of 400 employees); an IFC-supported renewable energy plant in India employing 120 women (100% of the workforce); and a joint ADB- and IFC-supported Bhutan-based hazelnut-sourcing company aiming to increase its share of female contract farmers to 50% (of 15,000 employees) by 2020. However, in all cases, the report does not show what the impact of the DFI investment has been.

4.3.5 ENERGY-SECTOR DISTRIBUTIONAL IMPACTS

There is no evidence of the distributional impact of DFI energy investment. A high-quality study from Steward Redqueen (2017a) of an IFC investment of $1.7 billion in Turkey finds that approximately 29% of jobs created were for women and 23% were for skilled workers. Overall, there is not enough evidence to confidently assess DFI distributional impacts.

4.3.6 OTHER DISTRIBUTIONAL IMPACTS FROM INFRASTRUCTURE

Overall, **there is no evidence of the distributional impact of DFI investment in non-energy infrastructure**. Only one high-quality study, an assessment by Mott MacDonald (2012) carried out on behalf of the IFC, identifies the distributional effect of non-energy infrastructure investments, pointing out that female employment generated could be as high as 50% of jobs created. While looking at the gender impact of public–private partnership (PPP) infrastructure projects, the study estimates total and female beneficiaries of infrastructure investment. Across the case studies, the average number of total beneficiaries varies significantly, from 10.5 million for a road construction project in Colombia to 100,000 for an irrigation programme in Morocco. Female beneficiaries range from 49.5% to 51.5% of total beneficiaries across all case studies. The study provides evidence that IFC-supported infrastructure programmes could have significant positive impacts in terms of providing access to services, and that the gender distribution of these impacts is approximately even. However, given the level of information provided on the programmes, it is impossible to verify these impacts and attribute the DFIs' contribution.

5 RESEARCH GAPS

Through the REA process we have identified six research gaps that could be considered for further research.

1) **Estimation, but no indirect assessment:** The indirect employment estimation techniques that most DFIs apply are fairly robust. The CDC's new employment evaluation technique is a good example of where the methodology is clearly explained and based on sound theoretical principles combined with well-established econometric techniques. Although anecdotal evidence suggests that DFIs are constantly experimenting to find better methods of evaluating employment impacts, for the result of this REA, it is still important to note that indirect employment effects are estimations. This means that there could be a large gap between actual indirect effects and estimated indirect effects. Future research could undertake deeper dives along investment supply chains to better estimate indirect effects. This would be a resource-intensive process, but it would help corroborate and refine indirect employment estimation techniques.

2) **No counterfactual:** As all the included reports are observational in nature, there is no counterfactual against which results can be compared. This is a significantly complex gap to fill, as a counterfactual usually requires an experimental approach that DFIs would not be in a position to take due to the nature of their investments.

3) **No clear net effects:** There is also no clear evaluation of net and gross employment creation (i.e. taking into account potential displaced employment), which is acknowledged in some studies, but still not included in their employment estimates. Higher-quality and more numerous studies are needed to better understand the net benefits of DFI investment. These types of study would require deep dives into investment markets to capture anonymised firm-level data or potentially micro-level randomised experiments. Until methodologies become more rigorous, caution should be exercised in drawing firm conclusions.

4) **Comparisons require greater levels of harmonisation:** Harmonisation efforts have improved among DFIs. This is largely through the Harmonised Indicators for Private Sector Operations (HIPSO) – a set of 38 indicators (including the definition of a job) agreed to by a group of 25 international financial institutions (IFIs) and EDFI members to avoid double-counting jobs created through joint investments. In addition, some studies provide an employment impact per euro or dollar spent. This could be used to compare the effectiveness of investments, but could be limited to intra-sectoral comparisons within the same country, as employment effects vary significantly by context. Furthermore, employment impact-reporting methods and employment impact-evaluation methods vary by DFI, meaning that, even within the same sector, it is difficult to rigorously compare outcomes between DFIs.

5) **Limited LIC representation:** Significantly fewer DFI impact investment studies are undertaken in LICs than in MICs, a research gap that should be bridged in future. However,

the issue is complex. For example, are DFI investments undertaken more in MICs than LICs and is this affecting the distribution of studies, or is it simply more difficult to carry out studies in LICs? It needs to be understood whether there are any pre-existing constraints to undertaking more studies in LICs before such a push is made.

6) **Poverty impacts are under-represented:** There is very little attention to poverty in DFI impact studies. If DFIs are to claim that their investments have poverty-alleviating impacts, they must have data to substantiate these claims. Moreover, the data must be disaggregated to better understand which people are benefiting most from DFI investments. Attempting to capture this type of distributional impact may present challenges in terms of being able to (a) accurately and effectively measure poverty-reduction effects and (b) accurately attribute poverty-reduction impacts to DFI investments. Even though this may present a challenge, capturing poverty-reduction impacts would significantly boost DFI development-impact attribution.

6 CONCLUSIONS

This REA set out to find the linkages between (a) DFI investment and increased incomes, (b) DFI investment and increased access to goods and services, and (c) DFI investment and other distributional impacts. The REA examines 43 high- and medium-quality studies that address these linkages.

Overall, the body of DFI literature is small compared with literature on international assistance or FDI, and the DFI literature is solely targeted at a policy audience. The limited literature base undermines the strength of the evidence when measured simply in terms of the number of studies that agree on the impact of DFI investment. What may be more relevant, given the size of the literature, is that there is a dearth of contradictory studies: the studies reviewed in this REA agree on positive outcomes as a result of DFI investment. While more than 43 studies answering the questions posed by this REA would have been desirable, the high- and medium-quality studies agree that DFI investments have positive impacts on job creation, which can in turn lead to increased incomes and access to goods and services.

ON THE IMPACT OF DFI INVESTMENT ON INCOMES THROUGH EMPLOYMENT

DFI investments contribute to raising incomes in developing countries through employment-generating effects. This conclusion is supported by a strong evidence base. At sectoral level, however, the strength of the evidence varies.

DFI financial-sector investments create jobs. Access-to-finance impacts are generally confined to SMEs. The literature finds that finance impact assessments focus on SME financing programmes, where evidence shows that beneficiary SMEs grow and create new jobs. However, there is no clear evidence that DFI investments lead to better access-to-finance outcomes, either at firm or individual level.

Energy-sector investments also create jobs. Studies illustrate impacts at the national level and find that DFI investments have had positive impacts through increased energy availability and reduced energy prices. In turn, this increases firm output, with positive impacts on growth and indirect employment. The evidence base is non-existent for the impact of DFI investments in the manufacturing sector and is limited, but inconclusive, for investments in the non-energy infrastructure sector.

ON THE IMPACT OF DFI INVESTMENT ON ACCESS TO GOODS AND SERVICES

DFI investments have increased access to goods and services. While there are no studies looking at the impact of DFI investment on access to goods and services at the national or portfolio level, there is limited evidence that finance-sector DFI investments have a positive impact. Studies show that DFI investments have helped SMEs access finance where they otherwise would not, and that DFI finance has helped increase access to trade finance in LICs.

DFI investments in the energy sector have increased the provision of energy. Firm-level case studies posit that the goods or services produced by supported firms would automatically

increase access to said goods or services. However, there are no estimates of net increases. Some case studies acknowledge that growth in DFI-supported firms may come at the expense of other firms, but they do not elaborate any further.

ON THE DISTRIBUTIONAL IMPACTS OF DFI INVESTMENTS

There is only modest evidence of any distributional impacts from DFI investment and this evidence is spread thinly across different distributional categories. Hence, there is no strong evidence base from which to draw conclusions as to how DFI investment affects different metrics, such as poverty, gender differences in employment or youth employment, or how it impacts the quality of work ('decent jobs').

At the aggregated (national or DFI portfolio) level, at least in part, **DFIs tend to target their investments at what are assumed to be poverty-reducing sectors and to poor countries, but the limited body of evidence shows no impact on poverty.** There is no evidence on gender and youth employment impacts, while there is limited evidence to suggest that DFIs take the issue of 'decent jobs' into consideration when investing. DFI investment can improve job quality by aiding the development of higher-value and higher-productivity sectors, which offer greater formal protections and skills-development opportunities.

DFI investments in the financial sector have increased female employment. However, there is not enough evidence to assess the distributional impact on youth or any evidence to assess the impact on the poor.

GOING FORWARD AND ADDRESSING THE RESEARCH GAPS

DFI literature is not as well developed as other literature on similar subjects, such as aid, FDI or trade. The main reason for this gap is the authorship and intended readership of the studies. As described in the opening pages of this REA, the DFI literature has been written by policy analysts for a policy audience. Academics and independent researchers have yet to commit their time and resources to studying DFIs, which has left the literature beholden to the information that DFIs and their clients are willing to share.

While this situation does not completely render the DFI literature immaterial, it does increase the caution with which readers must accept its findings. This will remain the case until DFIs are capable of collecting more data and elaborating and experimenting with more rigorous impact methodologies. DFIs, in collaboration with their stakeholders, could provide more resources to independently collect and verify data across relevant impact groups, which could increase the robustness of impact results. Such an effort would no doubt improve the literature and close some of the evidence gaps we have outlined in this REA.

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ANNEX A: REFERENCES OF QUALITY-ASSESSED STUDIES

Citation	Assessment of quality	Country	Country income group (LICs, LMICS, UMICS)
Section 4.1 DFI Investment impacts on income, through employment effects			
Employment impacts assessed at the national level			
IFC (2013) *IFC jobs study: assessing private sector contributions to job creation and poverty reduction*. Washington DC: World Bank	High quality	Not clear	LICs, LMICs, UMICs
Kapstein, E., Kim, R. and Eggeling, H. (2012a) *Modeling the socio-economic impact of potential IFC investments in Sri Lanka*. Washington DC: IFC	High quality	Sri Lanka	LMICs
Kapstein, E., Kim, R. and Eggeling, H. (2012b) *Modeling the socio-economic impact of potential IFC investments in Tunisia.* Washington DC: IFC	High quality	Tunisia	LMICs
Kapstein, E., Kim, R. and Eggeling, H. (2012c) *Socio-economic impact of IFC financing in Ghana*. Washington DC: IFC	High quality	Ghana	LMICs
Kapstein, E., Kim, R. and Eggeling, H. (2012) *Socio-economic impact of IFC financing in Jordan.* Washington DC: IFC	High quality	Jordan	UMICs
Oikawa, J., Casadevall, F. and Steward Redqueen (2012) 'Estimating the socioeconomic impact of IFC financing: macro case studies from Ghana, Jordan, Sri Lanka and Tunisia'. Washington DC: IFC	Medium quality	Ghana, Jordan, Sri Lanka, and Tunisia	LMICs, UMICs
Jouanjean, M.A. and te Velde, D.W. (2013) *The role of development finance institutions in promoting jobs and structural transformation: a quantitative assessment*. Working paper 377. London: ODI	High quality	Not clear	All
Employment impacts assessed at the portfolio level			
Dalberg (2010) *The growing role of the development finance institutions in international development policy.* Cologne: DEG	High quality	Not clear	Not clear
Lerner, J., Leamon, A., Dew, S. and Lee, D. I. (2015) *The impact of funds: an evaluation of CDC 2004-12*. Boston MA: Harvard Business School	High quality	Africa, China, South Asia, rest of world (ROW)	All

MacGillivray, A., Kim, R., van Moorsel, T. and Kehoe, A. (2017) *Measuring total employment effects: a lean data methodology for a portfolio of investments in developing countries*." London: CDC Group	High quality	Africa and Southeast Asia	All
Spratt, S., O'Flynn, P. and Flynn, J. (2018) *DFIs and development impact: an evaluation of Swedfund*. Stockholm: Expert Group for Aid Studies	High quality	All	LICs, LMICs, UMICs
Employment impacts of financial-sector investments			
Khanna, M. and Kehoe, A. (2017) *SME finance and growth: evidence from RBL Bank*. London: CDC Group	High quality	India	LMICs
IFC (2014a) *IFC and Fransabank supporting job creation in Lebanon*. Washington DC: IFC	High quality	Lebanon	UMICs
IFC (2013) *IFC jobs study: assessing private sector contributions to job creation and poverty reduction*. Washington DC: World Bank	High Quality	Not Clear	LICs, LMICs, UMICs
Koptya, M. and Domenech, L. (2015) 'Assessing private sector contributions to job creation: a bank case study in a Latin American country'. Washington DC: IFC	Medium Quality	Latin America	LMICs, UMICs
IEG (2013a) *World Bank Group support for innovation and entrepreneurship*. Washington DC: World Bank	Medium quality	Not clear	Not clear
IADB (2017) *Comparative study of equity investing in development finance institutions*. New York: IADB	Medium quality	All	All
WEF (2016) *Insights from blended finance investment vehicles and facilities*. Geneva, Switzerland: WEF	Medium quality	All	All
Employment impacts of manufacturing-sector investments			
IFC (2013) *IFC jobs study: assessing private sector contributions to job creation and poverty reduction*. Washington DC: IFC	High quality	Not clear	LICs, LMICs, UMICs
Employment Impacts of energy-sector investments			
Steward Redqueen (2016a) *The link between renewable energy and jobs*. The Hague: Steward Redqueen	High quality	Uruguay, India	LMICs
Steward Redqueen (2015) *Economic impact of IFI investments in power generation in the Philippines*. The Hague: Steward Redqueen	High quality	Philippines	LMICs
Steward Redqueen (2017a) *How power investments contribute to jobs and economic growth in Turkey*. Washington DC: IFC	High quality	Turkey	UMICs
Steward Redqueen (2017b) *The link between power investments and jobs in Senegal*. London: Private Infrastructure Development Group	High quality	Senegal	LICs

Scott, A., Darko, E., Seth, P. and Rud, J.-P. (2013) *Job creation impact study: Bugoye hydropower plant, Uganda*. London: ODI	High quality	Uganda	LICs
Dalberg (2012) *EDFI energy evaluation 2012*. Paris: Proparco	High quality	Kenya, Zambia	LMICs
Datta, N., Timilsina, G., Khanna, M. and Massuet, F.C. (2012) *Estimating employment effects of powerlinks transmission limited project in India and Bhutan*. Washington DC: World Bank	High quality	India, Bhutan	LMICs
FMO (2015) *Annual sector evaluation 2015*: *energy*. The Hague: FMO	Medium quality	Not clear	Not clear
Adam Smith International (2015) *InfraCo Asia Development Pte. Ltd: a progress review*. London: Adam Smith International	Medium quality	Asia	All
Employment impacts of manufacturing-sector investments			
Oxford Economics (2016) *An assessment of the economic effects of IFC's airport investments.* Oxford: Oxford Economics	High quality	Jamaica, Dominican Republic	UMICs
Goldblum, D., Khanna, M. and Mirmulstein Moses, M. (2015) *Promoting financial inclusion in India: evidence from Au FINANCIERS (INDIA) LIMITED*. Washington DC: World Bank	High quality	India	LMICs
Section 4.2 DFI investment impacts on access to goods and services			
Financial-sector impacts on access to goods and services			
Horus Development Finance (2014) *Evaluation of the effectiveness of EDFI support to SME development through financial institutions in Africa*. Paris: Horus Development Finance	High quality	Uganda, Tanzania, Kenya, Zambia, Ghana	LICs, LMICS
IEG (2013b) *Evaluation of the International Finance Corporation's Global Trade Finance Program, 2006-12*. Washington DC: World Bank	High quality	Sub-Saharan Africa (SSA), LAC	All
Alcantara, R. and Funes, R. (2016) *Benchmarking of development finance institutions*. Washington DC: Inter-American Development Bank	Medium quality	LAC	All
Gabriel, A. S. (2013) 'Development financial institutions and their role in supporting emerging markets private equity funds' *Journal of Public Administration, Finance and Law* 4: 126–33	Medium quality	All	All
IEG (2013a) *World Bank Group support for innovation and entrepreneurship*. Washington DC: World Bank	Medium quality	Not clear	Not clear
Energy-sector impacts on access to goods and services			
Steward Redqueen (2016a) *The link between renewable energy and jobs*. The Hague: Steward Redqueen	High quality	Uruguay, India	LMICs
Steward Redqueen (2015) *Economic impact of IFI investments in power generation in the Philippines*. The Hague: Steward Redqueen	High quality	Philippines	LMICs

Steward Redqueen (2017b) *The link between power investments and jobs in Senegal*. London: Private Infrastructure Development Group	High quality	Senegal	LICs
Scott, A., Darko, E., Seth, P. and Rud, J.P. (2013) *Job creation impact study: Bugoye hydropower plant, Uganda*. London: ODI	High quality	Uganda	LICs
Dalberg (2012) *EDFI energy evaluation 2012*. Paris: Proparco	High quality	Kenya, Zambia	LMICs
FMO (2015) *Annual sector evaluation 2015*: *energy*. The Hague: FMO	Medium quality	Not clear	Not clear
Slob, A., van Aalst, P., Vermeulen, J., Veenstra, E. and van der Haar, S. (2017) *Evaluation FMO Access to Energy Fund*. The Hague: APE Public Economics	Medium quality	SSA	LICs, LMICs, UMICs
Löwenstein, W. (2012) *Evaluation of selected DEG energy sector projects in Asia*. Cologne: DEG	Medium quality	Sri Lanka, China, Pakistan	LMICs, UMICs
Other infrastructure impacts on access to goods and services			
Dalberg (2014) *Impact, efficiency and lessons learnt: evaluating corporate social responsibility: case study of a toll road in India*. Cologne, Germany: DEG	Medium quality	India	LMICs
Section 4.3 Distributional impacts of DFI investments			
Distributional impacts at the national or portfolio level			
Spratt, S., O'Flynn, P. and Flynn, J. (2018) *DFIs and development impact: an evaluation of Swedfund*. Stockholm: Expert Group for Aid Studies	High quality	All	LICs, LMICs, UMICs
IEG (2011) *Assessing IFC's poverty focus and results*. Washington DC: IEG	High quality	All (SSA largest region)	All
IEG (2013c) *Youth employment programs: an evaluation of World Bank and International Finance Corporation support*. Washington DC: World Bank	High quality	Brazil, China, India, MENA, SSA	All
Ebert, F.C. and Posthuma, A. (2010) *Labour standards and development finance institutions: a review of current policies and activities*. Geneva, Switzerland: International Labour Organization	Medium quality	All	All
Ergon Associates (2019) *Decent work and development finance*. London: Ergon Associates	Medium quality	All	All
Financial-sector distributional impacts			
IFC (2013) *IFC jobs study: assessing private sector contributions to job creation and poverty reduction*. Washington DC: IFC	High quality	Not specified	LICs, LMICs, UMICs
Khanna, M. and Kehoe, A. (2017) *SME finance and growth: evidence from RBL Bank*. London: CDC Group	High quality	India	LMICs
IFC (2014b) *IFC and HBL supporting job creation in Pakistan*. Washington DC: IFC	High quality	Pakistan	LMICs
IFC (2014c) *Creating jobs in Sri Lanka: role of private sector financial institutions*. Colombo: IFC Sri Lanka	High quality	Sri Lanka	LMICs

Energy-sector distributional impacts			
Steward Redqueen (2017a) *How power investments contribute to jobs and economic growth in Turkey*. Washington DC: IFC	High quality	Turkey	UMICs
Manufacturing-sector distributional impacts			
ADB (2016) *How Inclusive Is Inclusive Business for Women? Examples from Asia and Latin America.* Manila: ADB	Medium quality	Asia, Latin America	All
Other infrastructure distributional impacts			
Mott MacDonald (2012) *Gender impact of public private partnerships: literature review synthesis report.* Washington DC: IFC	High quality	Not specified	Not specified
Contextual studies			
Macroeconomic impacts			
Massa, I., Mendez-Parra, M. and te Velde, D. W. (2016) *The macroeconomic effects of development finance institutions in sub-Saharan Africa*. London: ODI	High quality	SSA	LICs, LMICs
Massa, I. (2011) *Impact of multilateral development finance institutions on economic growth.* London: ODI	High quality	101 different countries	LICs, LMICs, UMICs
te Velde, D. W. (2008) *Regional integration, growth and convergence: analytical techniques and preliminary results*. London: ODI	High quality	Africa, Latin America	Not clear
Portfolio analysis			
Bracking, S. and Ganho, A. S. (2011) *Investing in private sector development: what are the returns?* Oslo: Norwegian Church Aid	High quality	All	All
Bortes, C., Sinha, S. and Grettve, A. (2011) *How do DFIs measure the development returns to investment in private enterprises? A review of the literature*. London: Nathan Associates	Medium quality	All	All
Romero, M. J. (2014) *A private affair*. Brussels: EURODAD	Medium quality	All	All
Theoretical			
Lemma, A., Massa, I., Scott, A. and te Velde, D. W. (2016) *What are the links between power, economic growth and job creation?* London: ODI	High quality	All	All
Steward Redqueen (2016) *What is the link between power and jobs in Uganda?* London: CDC Group	High quality	Uganda	LICs
Additionality			
te Velde, D. W. (2011) *The role of development finance institutions in tackling global challenges.* London: ODI	Medium quality	143 (31 conflict-affected) countries	All

Benn, J., Sangare, C. and Hos, T. (2017) *Amounts mobilised from the private sector by official development finance interventions*. Paris: OECD	Medium quality	All	All
Ecorys (2016) *Effectiveness study of fund emerging markets for development cooperation*. Rotterdam	Medium quality	Not clear	Not clear
DEG case studies			
DEG and Steward Redqueen (2015c) *South-South investment paves the way for the future.* Cologne: DEG	Low quality	Vietnam	LMICs
Dangelmaier, U. (2015) *Committed to fair working conditions.* Cologne: DEG	Low quality	Bangladesh	LMICs
DEG and Boston Group Consulting (BCG) (2016a) *Bridging the skills gaps in Bangladesh*. Brussels: EDFI	Low quality	Bangladesh	LMICs
DEG and Steward Redqueen (2015a) *Enabling higher yields and net increase in farmers' income*. Cologne: DEG	Low quality	Brazil	UMICs
DEG and BCG (2016b) *Bridging the skills gaps in Brazil*. Brussels: EDFI	Low quality	Brazil	UMICs
DEG and BCG (2016c) *Bridging the skills gaps in China*. Brussels: EDFI	Low quality	China	UMICs
DEG and BCG (2016d) *Bridging the skills gaps in Pakistan*. Brussels: EDFI	Low quality	Pakistan	LMICs
Dangelmaier, U. (2018) *Virú contributes to Peru's sustainable development.* Cologne, Germany: DEG	Low quality	Peru	UMICs
DEG and Steward Redqueen (2015b) *Local sourcing, a success story*. Cologne, Germany: DEG	Low quality	Namibia	UMICs
Summaries			
Spratt, S. and Ryan-Collins, L. (2012) *Development finance institutions and infrastructure: a systematic review of evidence for development additionality*. Brighton, UK: IDS	High quality	All	LICs, LMICs, UMICs
Craviolatti, P. (2018) *DFIs investment and job creation in low income countries.* Brighton, UK: IDS	Medium quality	All	LICS
Massa, I. (2013) *A brief review of the role of development finance institutions in promoting jobs and productivity change*. London: ODI	Medium quality	Not specified	LICs, LMICs, UMICs

ANNEX B: SEARCH RESULT TABLE

SEARCH CATEGORY	SEARCH ENGINES
Search database:	Google Scholar
Date of search:	14 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution' and 'income'
Results (number):	2230; filter: '2008-present': 1570
Search phrase:	'Development finance institution' and 'impact'
Results (number):	2380; filter: '2008-present': 1720
Search phrase:	'Development finance institution' and 'poverty reduction'
Results (number):	841; filter: '2008-present': 617
Search phrase:	'Development finance institution' and 'employment'
Results (number):	1730; filter: '2008-present': 1230
Search phrase:	'Development finance institution' and 'jobs'
Results (number):	1190; filter: '2008-present': 905
Search phrase:	'Development finance institution' and 'growth'
Results (number):	2450; filter: '2008-present': 1740
Search phrase:	'Development finance institution' and 'banking'
Results (number):	1610; filter: '2008-present': 1120
Search phrase:	'Development finance institution' and 'financial services'
Results (number):	1120; filter: '2008-present': 853
Search phrase:	'Development finance institution' and 'access to services'
Results (number):	128; filter: '2008-present': 84
Search phrase:	'Development finance institution' and 'informal economy'
Results (number):	129; filter: '2008-present': 91
Search phrase:	'Development finance institution' and 'inequality'
Results (number):	676; filter: '2008-present': 540
Search phrase:	'Development finance institution' and 'capital'
Results (number):	2270; filter: '2008-present': 1740
Search phrase:	'Development finance institution' and 'infrastructure'
Results (number):	2000; filter: '2008-present': 1470
Search phrase:	'Development finance institution' and 'investment'
Results (number):	2520; filter: '2008-present': 1800
Search phrase:	'Development finance institution' and 'gender'
Results (number):	845; filter: '2008-present': 649
Search database:	JSTOR
Date of search:	13 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	'Development finance institution' and 'income'
Results (number):	70
Search phrase:	'Development finance institution' and 'impact'
Results (number):	76
Search phrase:	'Development finance institution' and 'poverty reduction'
Results (number):	21
Search phrase:	'Development finance institution' and 'employment'
Results (number):	59

Search phrase:	‘Development finance institution’ and ‘jobs’
Results (number):	32
Search phrase:	‘Development finance institution’ and ‘growth’
Results (number):	87
Search phrase:	‘Development finance institution’ and ‘banking’
Results (number):	55
Search phrase:	‘Development finance institution’ and ‘financial services’
Results (number):	22
Search phrase:	‘Development finance institution’ and ‘access to services’
Results (number):	2
Search phrase:	‘Development finance institution’ and ‘informal economy’
Results (number):	1
Search phrase:	‘Development finance institution’ and ‘inequality’
Results (number):	18
Search phrase:	‘Development finance institution’ and ‘capital’
Results (number):	94
Search phrase:	‘Development finance institution’ and ‘infrastructure’
Results (number):	60
Search phrase:	‘Development finance institution’ and ‘investment’
Results (number):	91
Search phrase:	‘Development finance institution’ and ‘gender’
Results (number):	22
Search database:	Science Direct
Date of search:	17 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	‘Development finance institution’
Results (number):	263; filtered by ‘research articles’: 158
Search phrase:	‘Development finance institution’ and ‘income’
Results (number):	181
Search phrase:	‘Development finance institution’ and ‘impact’
Results (number):	222; filtered by ‘research articles’: 141
Search phrase:	‘Development finance institution’ and ‘poverty reduction’
Results (number):	31
Search phrase:	‘Development finance institution’ and ‘employment’
Results (number):	88
Search phrase:	‘Development finance institution’ and ‘jobs’
Results (number):	67
Search phrase:	‘Development finance institution’ and ‘growth’
Results (number):	213; filtered by ‘research articles’: 136
Search phrase:	‘Development finance institution’ and ‘banking’
Results (number):	116
Search phrase:	‘Development finance institution’ and ‘financial services’
Results (number):	48
Search phrase:	‘Development finance institution’ and ‘access to services’
Results (number):	9
Search phrase:	‘Development finance institution’ and ‘informal economy’
Results (number):	2
Search phrase:	‘Development finance institution’ and ‘inequality’
Results (number):	44
Search phrase:	‘Development finance institution’ and ‘capital’
Results (number):	221
Search phrase:	‘Development finance institution’ and ‘infrastructure’

Results (number):	165
Search phrase:	'Development finance institution' and 'investment'
Results (number):	240; filtered by 'research articles': 149
Search phrase:	'Development finance institution' and 'gender'
Results (number):	27
Search database:	SSRN
Date of search:	15 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	31; filter: '2008-present': 27
Search database:	IDEAS/RePEc
Date of search:	15 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	529; filter: '2008-present': 258 *Did not return 'development finance institution' as a string*
Search phrase:	'DFI'
Results (number):	7; filter: '2008-present': 3
Search phrase:	'Development finance institution' and 'DFI'
Results (number):	0
Search database:	International Political Science Abstracts
Date of search:	15 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	0
Search phrase:	'DFI'
Results (number):	0
Search database:	International Bibliography of the Social Sciences
Date of search:	15 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	4; filter: '2008-present': 3
Search phrase:	'Development finance' & 'DFI'
Results (number):	1; filter: '2009-present': 0
Search database:	Review of Development Finance
Date of search:	16 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	5
Search phrase:	'Development finance' & 'DFI'
Results (number):	0
Search database:	Scopus
Date of search:	16 November 2018
Inclusive date range:	ALL

Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	79; filter: '2008-present': 52
SEARCH CATEGORY	**JOURNALS**
Journal	World Development
Date of search	17 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	'Development finance institution'
Results (number):	26
Search phrase:	'DFI'
Results (number):	35
Journal	Journal of Development Economics
Date of search	12 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	'Development finance institution' and 'income'
Results (number):	730
Search phrase:	'Development finance institution' and 'impact'
Results (number):	664
Search phrase:	'Development finance institution' and 'poverty reduction'
Results (number):	168
Search phrase:	'Development finance institution' and 'employment'
Results (number):	387
Search phrase:	'Development finance institution' and 'jobs'
Results (number):	227
Search phrase:	'Development finance institution' and 'growth'
Results (number):	644
Search phrase:	'Development finance institution' and 'banking'
Results (number):	236
Search phrase:	'Development finance institution' and 'financial services'
Results (number):	399
Search phrase:	'Development finance institution' and 'access to services'
Results (number):	349
Search phrase:	'Development finance institution' and 'informal economy'
Results (number):	255
Search phrase:	'Development finance institution' and 'inequality'
Results (number):	278
Search phrase:	'Development finance institution' and 'capital'
Results (number):	712
Search phrase:	'Development finance institution' and 'infrastructure'
Results (number):	221
Search phrase:	'Development finance institution' and 'investment'
Results (number):	665
Search phrase:	'Development finance institution' and 'gender'
Results (number):	110
Journal	Journal of Development Studies
Date of search	17 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC

Search phrase:	'Development finance institution'
Results (number):	0
Search phrase:	'DFI'
Results (number):	11
Journal	Finance and Development
Date of search	17 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	'Development finance institution'
Results (number):	1
Search phrase:	'DFI'
Results (number):	0
Journal	Review of Development Finance
Date of search	16 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	5
Search phrase:	'DFI'
Results (number):	2
Journal	Journal of Emerging Market Finance
Date of search	27 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	1
Search phrase:	'DFI'
Results (number):	1
Journal	African Development Finance Journal
Date of search	27 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	0
Search phrase:	'DFI'
Results (number):	0
SEARCH CATEGORY	**GOVERNMENT**
Government ministry/agency	UK Government (DFID)
Date of search	14 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'; filtered for 'DFID' and 'research and analysis' OR 'corporate report' OR 'case study' OR 'DFID research output' OR 'consultation outcome' OR 'corporate information' OR 'policy paper'
Results (number):	24 (all were after 2008)
SEARCH CATEGORY	**INSTITUTIONAL PUBLICATIONS (IFIs, development banks, multilateral organisations)**
Institution	IADB

Date of search:	14 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	Searched 'Publications' page of website for 'development finance institution'
Results (number):	8
Institution	EDFI
Date of search:	15 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	N/A, searched 'Publications' page of website
Results (number):	6
Search phrase:	N/A, searched 'Case Studies' page of website
Results (number):	3
Institution	World Bank Group – Open Knowledge Repository
Date of search:	15 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	'Development finance institution'
Results (number):	102
Search phrase:	'DFI'
Results (number):	9
Search phrase:	'Development finance institution' and 'income'
Results (number):	63
Search phrase:	'Development finance institution' and 'impact'
Results (number):	24
Search phrase:	'Development finance institution' and 'poverty reduction'
Results (number):	12
Search phrase:	'Development finance institution' and 'employment'
Results (number):	41
Search phrase:	'Development finance institution' and 'jobs'
Results (number):	20
Search phrase:	'Development finance institution' and 'growth'
Results (number):	77
Search phrase:	'Development finance institution' and 'banking'
Results (number):	96
Search phrase:	'Development finance institution' and 'financial services'
Results (number):	54
Search phrase:	'Development finance institution' and 'access to services'
Results (number):	9
Search phrase:	'Development finance institution' and 'informal economy'
Results (number):	7
Search phrase:	'Development finance institution' and 'inequality'
Results (number):	17
Search phrase:	'Development finance institution' and 'capital'
Results (number):	82
Search phrase:	'Development finance institution' and 'infrastructure'
Results (number):	58
Search phrase:	'Development finance institution' and 'investment'
Results (number):	85
Search phrase:	'Development finance institution' and 'gender'

Results (number):	28
Institution	OECD iLibrary
Date of search:	15 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	‘Development finance institution’
Results (number):	1
Search phrase:	‘DFI’
Results (number):	3
Institution	ADB
Date of search:	16 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	‘Development finance institution’
Results (number):	486
Search phrase:	‘DFI’
Results (number):	2
Search phrase:	‘Development finance institution’ and ‘income’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘impact’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘poverty reduction’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘employment’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘jobs’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘growth’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘banking’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘financial services’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘access to services’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘informal economy’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘inequality’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘capital’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘infrastructure’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘investment’
Results (number):	0
Search phrase:	‘Development finance institution’ and ‘gender’
Results (number):	0
Institution	African Development Bank
Date of search:	27 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG

Search phrase:	'Development finance institution'
Results (number):	866
Search phrase:	'Development finance institution' filtered for 'documents'
Results (number):	9
Search phrase:	Navigated 'Knowledge' and 'Publications' webpage to 'Development Effectiveness Reviews' webpage
Results (number):	7
Institution	Islamic Development Bank
Date of search:	27 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	89
Search phrase:	'DFI'
Results (number):	1
Institution	World Bank Independent Evaluation Group
Date of search:	27 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	5
Search phrase:	'DFI'
Results (number):	1
Institution	Private Infrastructure Development Group
Date of search:	27 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	31
Search phrase:	Navigated 'Resource Library' webpage to 'Reports' webpage
Results (number):	2
Search phrase:	Navigated 'Resource Library' webpage to 'Results Monitoring' webpage
Results (number):	16
SEARCH CATEGORY	**INSTITUTIONAL PUBLICATIONS (Think Tanks)**
Institution	Overseas Development Institute
Date of search:	14 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	AL
Search phrase:	'Development finance institution'
Results (number):	6033
Institution	Center for Global Development
Date of search:	14 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	AL
Search phrase:	'Development finance institution'
Results (number):	1185
Institution	Institute of Development Studies
Date of search:	17 November 2018
Inclusive date range:	ALL

Language:	English
Researcher:	RC
Search phrase:	'Development finance institution'
Results (number):	86
Search phrase:	'DFI'
Results (number):	0
Search phrase:	'DFI'
Results (number):	654
Institution	World Economic Forum
Date of search:	19 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	51
SEARCH CATEGORY	**BILATERAL DEVELOPMENT FINANCE INSTITUTIONS**
Institution	FinDev Canada
Date of search:	14 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	'Development finance institution'
Results (number):	14
Institution	CDC
Date of search:	19 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	Navigated 'News & Insight' webpage to 'Insight' webpage to 'Evaluations' webpage
Results (number):	5
Search phrase:	Navigated 'News & Insight' webpage to 'Insight' webpage to 'Research' webpage
Results (number):	4
Institution	DEG
Date of search:	11 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	N/A, searched page entitled 'We evaluate our work' listed under 'Impact'
Results (number):	24
Institution	FMO
Date of search:	12 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	N/A, searched page entitled 'Results and reports'
Results (number):	45
Institution	OPIC
Date of search:	15 November 2018
Inclusive date range:	ALL
Language:	English
Search phrase:	N/A, searched page entitled 'Media library'
Results (number):	20

Search phrase:	N/A, searched page entitled ‘Annual Reports’
Results (number):	75
Institution	Proparco
Date of search:	16 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	N/A, searched page entitled ‘News and Media’; filtered by ‘publications’
Results (number):	8
Institution	BMI-SBI
Date of search:	18 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	N/A, searched whole website
Results (number):	0
Institution	IFU
Date of search:	20 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	N/A, searched page entitled ‘Media’; filtered ‘Publications’ and ‘Annual Reports’
Results (number):	58
Search phrase:	N/A, searched page entitled ‘Media’; filtered by ‘Publications’ and ‘Reports’
Results (number):	11
Institution	FinnFund
Date of search:	20 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	RC
Search phrase:	N/A, searched page entitled ‘News and Publications’
Results (number):	25
Institution	CDP/SIMEST
Date of search:	19 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	Navigated ‘About Us’ webpage to ‘Press & Media’ webpage to ‘Press Releases and Articles’ webpage
Results (number):	62
Search phrase:	Navigated ‘About Us’ webpage to ‘Press & Media’ webpage to ‘Publications’ webpage
Results (number):	2
Search phrase:	Navigated ‘About Us’ webpage to ‘Financial Statements’ webpage
Results (number):	5
Institution	Norfund
Date of search:	20 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	Navigated ‘Who we are’ webpage to ‘News’ webpage
Results (number):	87

Search phrase:	Navigated ‘Who we are’ webpage to ‘Our Impact’ webpage
Results (number):	7
Institution	SOFID
Date of search:	19 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	Navigated to ‘Our Investments’ webpage
Results (number):	13
Institution	COFIDES
Date of search:	20 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	Navigated ‘Corporate Information’ webpage to ‘Sustainability Reports’ webpage
Results (number):	8
Search phrase:	Navigated ‘Corporate Information’ webpage to ‘Other Documentation’ webpage
Results (number):	6
Institution	Swedfund
Date of search:	20 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	Navigated ‘About Swedfund’ webpage to ‘Publications’ webpage
Results (number):	27
Search phrase:	Navigated ‘About Swedfund’ webpage to ‘Annual Reports’ webpage
Results (number):	26
Institution	SIFEM
Date of search:	14 November 2018
Inclusive date range:	ALL
Language:	English
Researcher:	MG
Search phrase:	Navigated ‘Impact’ webpage to ‘Development Impact Reports’ webpage
Results (number):	5
Search phrase:	Navigated ‘Impact’ webpage to ‘Case Studies’ webpage
Results (number):	21

ANNEX C: EMPLOYMENT EFFECT ESTIMATION METHODOLOGIES

The following table provides a breakdown of the utility, pros and cons of the most common methodologies used to evaluate DFI employment, output and growth impacts.

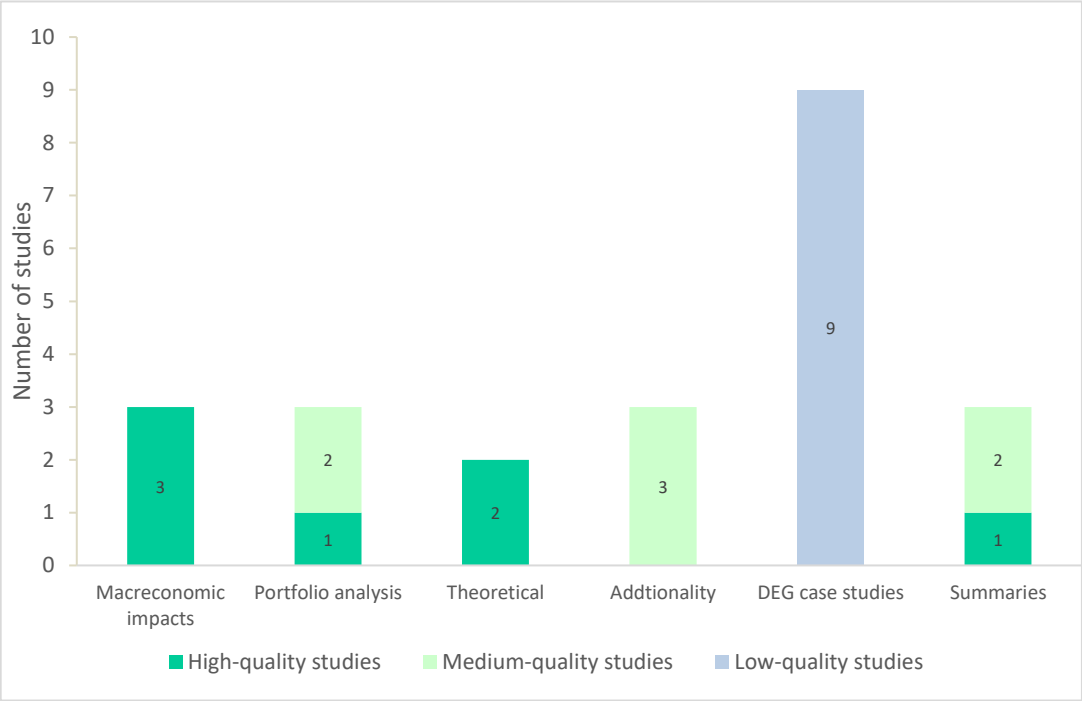
Method	What can it be used for?	Positives	Negative
Direct employment in DFI-supported projects	Assess direct employment impacts in DFI-supported projects.	Directly measurable.	Does not measure displacement effects (net employment), indirect, induced or second-order growth effects. Might overstate effects directly attributable only to DFIs.
Input-output models	Used to measure indirect employment by examining backward linkages across industries in traditional industries and could be linked to different types of skills, tax, etc. to compile a social accounting matrix.	Useful to obtain multipliers by sectors relatively easily.	Not useful in case of transformative changes in production structures (e.g. large-scale infrastructure investments) or when inputs are price dependent and substitutable, or when behavioural links change (in which case input/output coefficients would change). Measures expected impacts.
Firm-level/ national-level econometrics	Can be used to assess induced employment effects.	Useful to examine the empirical effects of the level and quality of services supply on firm performance among a range of factors.	Data intensive (needs panel data), needs good identification strategies.
Macro production-function approaches multiplier analysis	Can be used at macro level to see how (DFI) investment leads to output changes (calculating total factor productivity) which could then lead to employment effects.	Useful for quick assessments at aggregated level, for manufacturing, but less useful when the quantity of 'output' is not the main or only factor of interest.	Involves use of assumptions, estimations of production functions and employment intensities and is based on predicted rather than empirical effects. Does not measure second-order growth effects.
Case studies	Good for detailed information on individual investments.	Can be used to verify multiplier effects or aggregated economic effects.	Data intensive, difficult to obtain macro effect and counterfactuals.

Source: Adapted from Jouanjean and te Velde (2013)

ANNEX D: STATE OF THE EVIDENCE – CONTEXTUAL STUDIES

The contextual studies are not part of the assessed themes and are not included in the evidence impact base of the REA in the main body of the report. However, we have found them to provide context to the DFI impact investment discourse and, in the interest of completeness, we discuss these studies below.

Figure 12. Contextual studies: range of evidence by sub-theme and quality



MACROECONOMIC IMPACTS

Evidence on the macroeconomic impacts of DFI investments is limited to three high-quality studies. The two high-quality studies that look at the GDP growth impacts of DFI investments both show a positive impact. This is bolstered by one high-quality study that provides evidence that DFI investments may contribute to reduced regional income disparities, however, the number of studies covering this field is too low to confidently assert this.

Massa (2011), using a statistical analysis of DFI-sourced data, finds that a 10% increase in investment commitments from multilateral DFIs, such as the IFC, the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB), may increase growth by 1.3% in lower- and lower-middle-income countries (grouped together), and by 0.9% in higher-middle- and higher-income countries (also grouped together). The high-quality paper finds that after splitting the investment data by sector, lower-income countries mainly benefit from investments in agribusiness and infrastructure, while growth in high-income countries is supported by investment in infrastructure and industry sectors.

The second paper is a high-quality analysis by Massa et al. (2016), which is carried out for individual DFIs over variable time periods (dependent on data availability for each DFI) and on aggregate for all DFIs over the 2005–2013 period. The study provides sources of data, sufficient caveats to the robustness of the data and a full explanation of the methodology (and associated caveats) used for the analysis. The results of the study indicate that there is a positive and significant effect of DFI investments on labour productivity and GDP per capita growth. The study collects country-specific DFI investment data in SSA to undertake a comprehensive econometric analysis of DFI growth outcomes in the region.

The third high-quality paper employs a statistical analysis to determine that regional DFI investment – as measured by DFI loan exposure to regional GDP – has reduced regional income disparities. Although the paper does not conclude that this reduction of income disparity has meant increased income for all in these regions, it posits that it is likely that the real per capita income of the poorest countries grew faster, shrinking the disparity. The data on the DFIs were sourced from DFI annual reports, which slightly undermines the independence of the findings. However, given that the data are an input in a broader regression analysis, it is unlikely that the findings are significantly biased. Increased access to goods and services is not mentioned as an outcome of DFI investment (te Velde, 2008).

PORTFOLIO ANALYSIS

Bracking and Ganho (2011) review the development-impact evaluation systems of European DFIs and conclude that progress on data collection and measuring development impact is uneven. On jobs, the authors note that some DFIs, such as Norfund, measure the quality of jobs created, while other DFIs lag in gathering this type of data. The authors do not touch upon measuring any increased access to goods and services that may accompany DFI investment. The high-quality report is well researched and methodologically strong. While it relies on publicly available information released by DFIs, it has supplemented this information with surveys and interviews. Nevertheless, it does not offer new information that addresses the purpose of this REA.

A medium-quality report by Romero (2014) analyses the portfolios of the ADB, DEG, EIB, FMO, IFC and Proparco, and raises concerns regarding a lack of investment in LICs, over-investment in the financial sector, improper assessment and monitoring of some financial instruments, and a lack of transparency. The author calls on these organisations to increase developing-country ownership of the investment process and to ensure that DFI investments are targeting the most needy populations. Relying on external reporting from these organisations without outlining the reason why these six organisations were chosen undermines the external validity of the claims made. Moreover, the mentions of job creation or increased access to goods and services are written to acknowledge that they may exist, but that they may be overstated or accompanied by unintended consequences. The reported evidence for these claims is quite weak.

Bortes et al. (2011) carried out a medium-quality literature review on behalf of DFID. The report reviews how selected DFIs and MDBs define and measure the development impact of

their private-sector investments. The extensive review notes that the literature shows little evidence of DFIs and MDBs quantifying outcome indicators, such as income effects or benefits to consumers. Moreover, the authors report that there is little empirical evidence of the impact on DFIs and MDBs on regional or national economies. The authors surmise that this lack of evidence is possibly due to the cost of these evaluations. While the review notes the importance of job creation to DFI and MDB reporting, as well as the theoretical increased access to goods and services via infrastructure investments and increased access to finance, the authors provide no new data on the subject. The methodology of the review is sound, but it does not add new evidence to answer the questions of this REA.

THEORETICAL

A high-quality study conducted on behalf of the CDC (Lemma et al., 2016) analyses the statistical links between energy use, economic growth and employment. The key finding from the report is that most of the statistical research finds that there is a positive correlation between energy use and economic growth, and energy use and employment, supporting the thesis that investments in energy can support growth and employment. The research does not have significant links to DFI investments, except for a summary of the Bugoye power-plant investment, which is independently summarised elsewhere in the REA.

A high-quality report from Steward Redqueen (2016b) on behalf of CDC looks at how improvements in the availability, affordability and reliability of electricity impacts households and companies in Uganda. The study maps electricity price changes attributable to increased energy generation onto changes in firm output levels, then uses input/output (I/O) analyses to assess changes to Ugandan employment levels and GDP. This analysis concludes that every 1% increase in electricity generation capacity causes a 0.06% increase in GDP and a 0.03% increase in employment. However, the study does not specifically assess DFI impacts, so it can be considered a theoretical contribution, but not directly applicable to the results of this REA.

ADDITIONALITY

By putting forward a new framework to assess the macro-level impact of DFI investment, te Velde (2011), in his medium-quality paper, argues that DFI impact assessments should go beyond micro-level impacts and assess DFI investments on their ability to tackle global crises. Employing a regression analysis based on data from EIB, EBRD, IFC and CDC, the author finds that DFI investments have improved energy efficiency and have had positive impacts on the investment-to-GDP ratios of host countries. The paper presents the number of jobs supported by investments from DEG, EDFI and IFC, and notes that the figures suggest that DEG and EDFI supported more labour-intensive projects, while the IFC supported more capital-intensive investments. Though quite a rigorous analysis, the paper does not report on increased access to goods and services and remains dependent on the data disclosed by the DFIs. Moreover, from an external validity standpoint, claims that findings from the regression analysis apply to DFIs in the main overlook the heterogeneity of DFI operations and do not fully acknowledge that the regression data were sourced from only four organisations.

A medium-quality working paper by Benn et al. (2017) is the result of a 2016 OECD Development Assistance Committee survey on the amounts mobilised from the private sector by official development interventions in 2012–2015. The survey was not limited to bilateral or multilateral DFIs; it was sent to aid agencies as well. Although the working paper is clear with respect to organisations that received the surveys and responded, how these organisations calculated their 'amounts mobilised' figures is not clear. Given that the survey is based on an organisation's willingness to self-report these figures, it is possible that the figures are biased by successful 'mobilisers' being the most likely to report. The working paper did not collect or disclose data on increased incomes or increased access to goods and services resulting from these mobilised amounts.

A medium-quality paper from Ecorys (2016) is the result of an effectiveness evaluation of three FMO OS programme investments in Nigeria, Tunisia and Guatemala that assesses the additionality, catalytic and demonstration effects of the three cases. On additionality, the assessment is that the impact of FMO OS funding is uncertain. Given that none of the projects received further funding, the FMO investments are not catalytic either. The authors report on some demonstration effects in one of the cases, but not in the other two. Although the FMO's OS programme was mandated to contribute to induced employment and business income, the evaluation does not report on any of these metrics. Furthermore, the methodology of the assessment remains unclear and the external validity is limited.

DEG CASE STUDIES

In addition to the aforementioned examples, nine case studies (discussed in the following pages) were funded by the DEG (German Investment Corporation, Deutsche Investitions- und Entwicklungsgesellschaft) to evaluate the outcomes of varied labour-skills programmes within firms, supported by their investment in the manufacturing sector. The case studies have not been included in the main body of the REA due to the fact that the DFI impact-assessment evaluation methodology is not explained, so there are no directly attributable impact outcomes that could be assessed. This was because the contribution (either financial or technical) of DEG to the implementation of the skill programmes was not explained. Even though the results of these case studies do not contribute to the evidence base, their qualitative narratives can help us to understand how firm-level changes could, theoretically, contribute to improved worker conditions and employment outcomes.

In 2010, DEG financed an expansion project for a Chinese textile firm in Viet Nam (DEG and Steward Redqueen, 2015c). This case study states that DEG contributed $15 million to a syndicated loan, together with FMO and Citibank, for a total of $60 million. The report highlights the following development impacts that had occurred by 2014: (1) an increase of 959 jobs in the existing workforce (3,000 workers); (2) an improvement in the working conditions of all workers (increased staff retention, improved wages and provision of on-the-job training); and (3) local (Vietnamese) staff helped to replace Chinese managerial staff.

A second DEG report (Dangelmaier, 2015) looks at a garment manufacturer in Bangladesh. The company received co-financing by DEG, FMO, IFC and the Development Bank of Austria (OeEB), however the scale, timing and modality are not specified. The firm employs 21,000 people, of which 7,400 are women. The report illustrates a number of decent jobs and ESG improvement initiatives enacted by the company, but does not link these back to DFI financing activities. The outcomes are varied. Of note is the fact that the company is reputed to pay wages above the legal minimum for 90% of its workforce, with wages (on average) 20% higher than the national minimum and 6% higher than the industry average. Absenteeism rates also reportedly dropped from 3.35% in 2012 to 1.09% in 2014, while employee turnover rates also declined.

DEG and Steward Redqueen (2015b) is the third DEG firm-level case study. DEG provided financial support and technical assistance to help a German cement company set up an operation in Namibia in 2008. DEG invested €31.5 million, the EIB invested €82.3 million and the Development Bank of Southern Africa invested €18 million of the total €249.8 million investment. The plant is estimated to have directly created 331 permanent jobs and 2,700 indirect jobs within its supply chain. It has enabled technology transfer, set up a doctor's clinic, provided financial support to a local hospital and set up a trust to support local communities. It is estimated (methodology not discussed) to account for at least 1% of Namibian GDP.

In 2013, DEG co-invested ($5.6 million) together with a local private equity fund in a Brazilian fertiliser company, as seen in another DEG-funded case study (DEG and Steward Redqueen 2015a). With the investment, DEG acquired a 24% stake in the company. The report states that the investment contributed to the full formalisation of firm activities, an expansion in research and development capabilities, and the creation of 50 additional high-skilled decent jobs, the strengthening of the company's ESG structures and a possible increase in crop yields and revenues for farmers (the report does not elaborate on this point). DEG also states that it provided technical advice to improve company operations and implement the required ESG structures.

The fifth case study (DEG and BCG, 2016d) shows how DEG supported the expansion of Engro, a Pakistani company with multiple products, mainly fertilisers, by providing financing (the scale of which is not provided) to modernise its fertiliser production facility and power plant, finance research activities and provide support for female farmers in Engro's supply chain. Engro set up a workforce training programme, investing in employee skills development and a technical training college for potential future employees. This has helped to provide a steady supply of skilled workers for the firm and provided valuable skills for college students, which has increased their overall employability levels. It has also provided training for farmers to improve crop yields by demonstrating correct fertiliser use, boosting productivity and the sale of fertilisers – approximately 10,000 farmers have received training, with an average increase of 14% in rice yields. The female economic empowerment initiative has trained and helped 538 women gain employment as farm extension workers and provided them with the resources to train another 18,000 women as farmers.

DEG and BCG (2016a) is a DEG firm-level case study in which DEG has provided a five-year concessional loan to a Bangladeshi garment manufacturer, conditional on 'improvements in

environmental responsibility and employee health and safety'. It states that it has also provided the technical assistance necessary to make these improvements. The report lists a number of employee-focused productivity-enhancement measures that the firm has implemented, though there is no mention of DEG's role in these activities. The report states that the firm directly employs 6,300 people, of which 70% are female, and indirectly supports 15,000 other jobs, but does not elaborate on whether the DEG loan has had any kind of impact on employment levels.

The seventh DEG case study (DEG and BCG, 2016b) looks at an investment DEG made with Proparco and the Brazilian Development Bank (BNDES) to help finance a hospital in Brazil. The report evaluates a number of employee- and skills-training programmes the hospital has implemented, noting that the hospital hired an additional 1,000 personnel between 2012 and 2014. It does not link these jobs with the DFI investment, however, so it is unclear what the DFI impact is in this case.

The eighth DEG firm-level case study (DEG and BCG 2016c) relates how DEG has supported a Chinese toy manufacturer since 2006 through the develoPPP.de programme, providing technical assistance and financing. The company has set up a number of employee skills and training programmes, both internally and for its suppliers, as well as research and development investments and community TVET programmes. While the report does not say how many new jobs were created, the initiatives seem to have spurred a number of other commercial benefits, such as new products, a larger skilled-worker pool and improved worker productivity. However, the initiatives are not directly linked to DEG financing.

The final DEG case study (Dangelmaier, 2018) looks at the impact of Viru, a Peruvian agricultural exporter to which DEG provided a long-term loan in 2013. The report says that by 2017, the company employed 7,500 staff in 'decent jobs', as defined by the ILO, and that it was fully compliant with ILO Core Labour Standards. The report cites employment growth of 39% at the company since DEG's first investment.

SUMMARY LITERATURE

Spratt and Ryan-Collins (2012) provide a high-quality summary study of literature linking DFI support for private participation in infrastructure to economic growth and poverty reduction. The report provides a good outline of the literature on the additionality of DFI investments in infrastructure and adequately problematises the impact on incomes of infrastructure projects. However, the report does not provide new DFI income, employment or access-to-goods-and-services impact data.

Craviolatti's (2018) medium-quality report was written for the Knowledge, Evidence and Learning (K4D) network on behalf of and supported by DFID. The report provides a synthesis of the DFI mandate and a literature review focused on how DFIs measure and report job creation. The report states that DFIs measure impacts at the project, sectoral and macro (national) level. Although a solid piece of synthesis, the report only cites figures as reported by the DFIs themselves, not providing any new insights into DFI impacts on income or access to services.

Finally, Massa (2013) assesses the literature linking DFIs, employment and productivity change. This medium-quality study provides a good summary of the methods used to assess DFI impacts and provides some citations of previously reported impact data, but it does not provide new data on DFI impacts on income, employment or access to goods and services.

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